

CHEETAL

Journal of

Wild Life Preservation Society of India



VOL. 6

APRIL, 1964

NO. 2

Wild Life Preservation Society of India.

I. The aims and objects of the Society are as follows :

- (a) To promote interest in the preservation and conservation of all forms of animal life among the youth of the country.
- (b) To assist in enforcing the game and arms rules and to bring to the notice of the authorities any infringements of the same.
- (c) To advise and help Government and the District authorities in the formation, maintenance and protection of Sanctuaries and National Parks.
- (d) To raise funds for the carrying out of the above aims and objects.
- (e) To carry on any other activities which will serve the above objectives, including publicity and propaganda and the issue of a journal.
- (f) To assist members of the Society in obtaining shooting and fishing facilities and facilities for viewing and photographing wild life etc.
- (g) To conduct research into the problem of wild life management in India, and in pursuance of this, to initiate, encourage and, where possible, assist in, projects for the study of threatened species and related subjects. To provide reference and research facilities for such work.

II. The Society has, upto date:—(31-3-63).

Patrons	...	19	Educational members	...	28
Life members	...	70	Professional members	...	43
Ordinary members	...	178	Honorary members	...	9
Institutional members	...	4	Family Members	...	1
Affiliated members	...	5			

Total Membership is 357 (Excluding Student Members)

III. Office Bearers and Members of the Executive Committee.

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14. Shri H. K. Dang
15. Capt. Reginald Sawhney
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17. Shri P. D. Stracey

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18. Dr. M. B. Lal
19. Shri Padam Bahadur Singh
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21. Shri Darshan Lal
22. S. Balbir Singh
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24. S. Vivek Singh Majithia
25. Shri K. S. Srivastava

Ex-Officio Members.

Chief Wild Life Warden, U.P., Lucknow.

Wild Life, Warden, Western Region, U.P.

D.F.O., Dehra Dun.

D.F.O., Saharanpur Division, Dehra Dun.

District Magistrate, Dehra Dun.

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- (2) Publicity
- (3) Education and Propaganda
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President:—Kumar Surendra Singh

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The unavoidable delay in bringing out this issue of "Cheetal" is regreted and all members of Wild Life Preservation Society of India and subscribers to the "Cheetal" are assured that there shall be no delay in future.

—Editor.

(Lines found on the Prime Minister's pad in his own hand.)

"The woods are lovely, dark, and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep."

Robert Frost.

(Lines found on the Prime Minister's pad in his own hand.)

JAWAHAR LAL NEHRU

The Wild Life Preservation Society of India mourns the passing away of Shri Jawahar Lal Nehru—the beloved of the people, a universal man, a modern mind, the architect of modern India, a man of peace and a lover of wild life in the true tradition of this land of Buddha and Gandhi, and conveys its deep sense of sorrow and grief and heartfelt condolences to Shrimati Indira Gandhi in her sad bereavement.

Shri Jawahar Lal Nehru was a born conservationist and wrote:—

“I indulged in some diversions like shikar but I had no special aptitude or inclination for it. I liked the outings and the jungle and cared little for the killing. Indeed my reputation was a singularly bloodless one, although I once succeeded, more or less by a fluke, in killing a bear in Kashmir. An incident with a little antelope damped even the little ardour that I possessed for shikar. This harmless little animal fell down at my feet, wounded to death, and looked up at me with its great big eyes full of tears. Those eyes have often haunted me since.”

Wild life deeply interested and delighted him and his pets provided him with relaxation even when he had complex problems to face.

About Wild Life he wrote:—

“How easy it is to make friends with everything in nature if you go to them affectionately and with friendship.”

On the occasion of a meeting of the Indian Wild Life Board in September 1956, he sent a message:—

“I welcome the new interest in India in the preservation of Wild Life. Life would become very dull and colourless if we did not have these magnificent animals and birds to look at and play with.”

Let us, therefore, dedicate ourselves once again to the cause of preservation of Wild Life and thus fulfil the desire of our departed leader to enrich the life of generations to come.



Jawahar Lal Nehru with his beloved Pandas—Bhisma and Pema

Wild Life Preservation Society of India

Vol. VI

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No. 2

Ourselves

The Conservation of natural resources is a complex, and as contemporary jargon has it, a technical subject, though its foremost protagonists are ardent amateurs. A journal like our's has, thus, to steer the difficult middle course between the two extremes. Our Scylla is a technical complexity untrue to our amateur origins and incomprehensible to our enthusiastic, rather than specialised, membership. Our Charybdis, an amateur enthusiasm that neglects the necessity of knowledgeable programmes of research and study into the arts of Conservation.

We hope we are rightly confident that we are taking our members with us, when we feel we must set the standards in this search for the middle course. After much thought and investigation, we have finally decided to launch an intensive programme of basic research into wild life conservation, something which under the present dispensation, we cannot, unfortunately, expect the proper authorities to undertake. The programme involves groundwork studies under five headings, each being prosecuted by an expert, specialist or knowledgeable amateur in the relevant field. They are to be conducted under the aegis of The Society, though no kind of material assistance can be offered to these voluntary workers till the Government of India make a final decision in the matter of giving a grant-in-aid to The Society for the publication of The Cheetal. This much-deferred grant-in-aid, the anticipated sanctioning of which we prematurely published in our last issue, would release Society funds from The Cheetal, for the acquisition of a research and reference library and other items essential to the effective execution of such studies.

A detailed summary of these research projects appears in the Editorial Notes. Suffice it here to say that Research is, briefly, an impressive way of describing the activity of collecting data, organising and collating this information and acting as a source of information for further study upon which, one hopes, wise authorities will choose to base their policy-decisions. That authorities are not always wise does not detract from the need for research. We are increasingly being approached by professional foresters and zoologists, not to mention Conservation agencies and groups the world over, for information and data. This we are unable to supply, given the almost untouched nature of this field of study in India, and the almost total lack of reference works on the subject. Perhaps, this interest in facts on the part of foresters and others is the sign of a heartening trend, and so we will hope, for it is, in the ultimate reckoning, they who must and can do the most for wild life.

Editorial Notes

The Society's Research Programme

The Indian Elephant: Following increasing devastation of standing crops and forest plantations by the expanding herds of wild elephants in several states of India, Mr. S.S. Negi, Retired Conservator of Forests and our Executive Vice-President, has undertaken to report on all aspects of this growing menace. This study will include investigation of the food, range, breeding, present status and connected environmental factors of the Indian Elephant. From it, we hope, will emerge not only the optimum number of elephants that a given area of a certain class of forest can support without damaging the environment, but also answer to questions like 'how many of the present elephant population must be removed and by what means, and what recommendations, additional to the ones already made, can be offered to the Government in this context'.

A comprehensive study of the Mahseer (*Tor putitora*) will be the result of a thesis being prepared by Dr. M.B. Lal, a zoologist, in collaboration with Dr. Baini Prashad, O.B.E., who needs no introduction. We hope this can be made to tie-up with The Society's efforts to bring the renegade dynamiting of fish, rife all over India, under control, by making irrefutably knowledgeable recommendations to government departments. At present we are seriously handicapped by insufficiency and inadequacy of available information.

Mr. Hari Dang, of the Doon School, is working on a compilation of all available information in the vast field of Himalayan Fauna, and this will be the basis for an exhaustive thesis on the subject from facts and figures gathered in the field. The species covered by this study are:

Thar	Musk Deer	Snow Leopard	Snow Cock
Burrhel	Tibetan Gazelle	Clouded Leopard	Snow Partridge
Ghooral	Tibetan Antelope	Red Bear	Snow Pigeon
Ibex		Black Bear	Monal Pheasant
Markhor			Chir Pheasant
Ovis ammon			Tragopan or the Crimson-Horned Pheasant
Serow			Koklas Pheasant
Takin			Chukor, or Hill Partridge

The exceptional difficulties of the vast terrain will preclude any intensive degree of coverage, but it is hoped to make as thorough a study as these limitations permit. [The Abominable Snowman, for some reason, has been missed from this list, we observe! Ed.]

Though the expert report prepared by Dr. Gardiner Bump of the U.S. Fish and Wildlife Service, covered the Red Junglefowl and the Kalij Pheasant very well, The Society has been collaborating with Dr. Norman Collis in this work on the Red Junglefowl, and this collaboration will be continued, and further research into the breeding cycles and population dynamics of these and other Game Birds will be initiated independently by The Society.

Mr. Hari Dang is making a study of the Swamp Deer (*Cervus ducauceli*), a species in danger of extinction, though not yet declared a 'threatened species'. This study will touch upon the related species, the Sikkim Stag and the Kashmir Stag, also.

* * * * *

(It may be added, here, that, as a more general field of study, but one integrally pertinent, logs are being compiled for all the National Parks and Sanctuaries of India by the Editors of The Cheetal, and Wild Life Management is being studied from the point of view of Indian conditions. It is hoped that when the evidence gathered gains sufficient weight, the momentum will be successfully used to persuade the authorities to give way to the imperatives dictated by circumstances, rather than to the caprices dictated by less inevitable sources.

We should report here that, to bring the Constitution of The Society into line with this formal expansion of our activities, formal because research is an integral part of the activities of any such Society, the Executive Committee have had the requisite additional paragraph inserted in the Aims and Objects of The Society, as published in the Inside Front Cover.....

..... Editor.)

The Elephant Problem :

At the risk of repeating ourselves, we must report that the Indian Elephant is fast becoming a White Elephant.

In the past, elephants were much in demand for lumbering, in Assam and the South; for use as steeds in ceremonial occasions and state drives; for use by the Railways in the transportation of sleepers, and they filled Princely stables and large farms for purposes of 'shikar' etc. With the growing diffusion of personal wealth, and the evolution and spread of better means of conveyance, the elephant finds himself in the same bracket as the 'Educated Unemployed': He cannot learn new tricks, nor can he change his speed and shape and size.

Providing joy-rides for children at zoos, ornamenting the odd Presidential Procession, giving Prime Ministers something to present to foreign Dignitaries, all these are functions never likely to lead to a complete rehabilitation of this ungainly pachyderm in the economy of the world.

When you add to these factors the undoubted destructiveness of the animal, you have a prescription for grave trouble. Fortunately, it is not easy to poach an elephant, since it takes twenty men and a thousand-odd rupees even to give an elephant a decent burial or cremation. The danger is, rather, the reverse. The Indian Elephant, unlike the African species, does not ruin its chances of survival, by wrecking havoc in the area it inhabits. He merely ruins the chances of survival of simple people, peasants and tribals, whose crops it devours and tramples under flat feet. It also increases the expenses of the Forest Department in maintaining plantations, the tender growth of which areas it particularly seems to relish.

Though the Indian Elephant ranged over a far wider area a hundred years ago than he does now, there are signs that their numbers have increased to such an extent that they are moving into their abandoned haunts, and unless artificially culled and controlled, they will destroy their own habitat through overgrazing. Having no enemies other than man, and food and water-shortage, they can multiply astonishingly. It was Charles Darwin who, in 1859, calculated that a pair of elephants that began breeding at the age of thirty and produced six young, would, in 750 years, multiply to 19 million elephants, granted that all turned out to be centenarians. Actually, the Indian Elephant survives to only about seventy years of age, but it begins to breed after the age of twelve, not thirty, and gives birth to roughly an even dozen in a lifetime. This indicates even more prolific increases than Darwin calculated. This is, indeed, what is happening in India today.

It is not easy to take a census of the elephant population of an area, but a fairly good estimate of the population in the Uttar Pradesh places their numbers at one thousand. These are generally distributed in family units and singleton tuskors, but foregather into large herds for breeding. The damage they do can be estimated from the fact that an average elephant consumes five tons of food per day. Their digestive mechanisms are inefficient, and the best half of this intake is discarded as impressive mounds of moluses all over the forest. Being discriminating feeders, they pick the best grasses and show a perverse preference for paddy and plantation crops and nursery-trees. To get at the food, they knock down trees, tear the bark of other trees which subsequently perish, and generally devastate whole areas of forest. When a herd of elephants passes through a forest, it looks like a battlefield after the retreat. Trees upto two feet in diameter are often pushed over, sometimes merely in an excess of high spirits.

News coming in to The Society indicates that rampaging herds may soon force the hands of the Administration to take steps which, unless planned and thought-out in advance, may bear the faults of improvisation. Rogue elephants are another aspect of the same problem, for when man and beast compete for the use of their common environment, friction becomes inevitable. Under these circumstances, the duty of The Wild Life Preservation Society is clear: We must ensure sound wild life management practices by forestalling uninformed, last-minute orders, by suggesting principles for the culling of these animals. Control of numbers is as much a part of Conservation, as is preservation of threatened species.

We are glad to note that the Orissa Government has recently sanctioned a sum of Rs. 17,000.00 for the digging of sixty pits for the capture of wild elephants in the Kond areas, where they have been pushing these loveable tribals to the verge of starvation. But we cannot help wondering what the authorities intend to do with the captured elephants. Surely, sportsmen can be found to destroy more humanely these deprecators than the pit method will !

Our own recommendations, made to the Uttar Pradesh Government last year, seem to have borne fruit also. We hear that a prominent farmer of the Doon, who, presumably, petitioned to the authorities together with other cultivators of the valley, has been given permission to destroy five of the seventy-odd elephants that have remained on the right bank of the Ganges this year. This number is quite unprecedented in recent years, and each year, driven to the west by the increase in numbers on the East banks more and more elephants are staying on throughout the year in the yet-undamaged forests of the Doon.

This is a step in the right direction, though we feel the authorities must ensure a balance between the numbers of Bull and Cow elephants shot.

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River Valley Projects and the Future of Sporting Fish

All over India, recreation and sport on our rivers are threatened by a gigantic landslide of concrete, damming, diverting and dispersing entire river systems in a monumental tinkering with water resources and the integrity of the natural aquatic environment.

Incredible basic alterations in the natural system of storage and dispersal of the precious element are in the offing. Faced with such radical planning, and planning, at that, which often ignores certain vital aspects in its single-minded pre-occupation with a few obvious needs, Conservationist blood cannot but boil.

Land reclamation, Hydel production, flood-control and navigational improvement are near to our hearts as good citizens, and we would not dream of suggesting the abandonment of projects merely on the grounds that they might harm 'sport-fishing', but when careful forethought can save fish, can let us eat the cake of progress and have the old cake too, then we feel we must spotlight instances of mis-governmental blindness.

To take but one example, a remarkable series of dams, barrages and diversion canals is being planned and executed in the system of the River Jamuna. Some of the controversial aspects of this scheme have been making news because the two states concerned could not reach agreement over the apportionment of costs and advantages.

What astonished and annoyed us was the story of how a system of fish ladders was envisaged for this major project, to permit the king of sporting fish, the Mahaseer, to have access to its traditional spawning grounds in the side-streams which debouch into the Jamuna and the Tons, and how, on receipt of a rather mysteriously peremptory letter from an authority in the Government's Fisheries Department, the scheme was scrapped.

This learned official, it appears, wrote briefly to say that there were no migratory fish in the Jamuna, and as such fish ladders were superfluous. There you have it.

Now, with due deference to the views of this learned gentleman, we should like to point out that there never has been, nor ever can be, any doubt whatsoever that the Mahaseer is an outright and compulsive migrant. As Dr. M.B. Lal wrote in his paper in *The Cheetal* of October, 1963, this fish migrates upstream at the onset of summer-weather in search of safe spawning grounds, good food and an escape from floodwater. We are not alone in having seen Mahaseer jump rapids which might well faze many other sporting fish, so there can be no doubt that fish ladders could be devised which the Mahaseer would design to use to get back to their old spawning grounds, past the rich crop of dams and barrages. Why such arbitrary haste was shown in scrapping the planned fish-ladder from the Dakpathar dam, and ladders omitted from the other planned dams, we do not understand.

We realise there are difficulties. The Mahaseer, and other fish in Indian rivers, are not long-distance migrants. They are not even strong migrants, as the Pacific and Atlantic Salmon. Not being vigorous enough, they would not be able to make full use of the conventional ladders used for Salmon. But, surely, that is reason for devising the right sort of ladder, not for dropping all effort to save the Mahaseer !!

There is no assurance that ladders will be effective, or that there will be a two-way process of ladder-jumping, which is essential if the ladder is to fulfil its function. We are aware that water-level on Indian rivers fluctuates greatly, and that a system of ladders strung

out all over the Jamuna Valley projects would be expensive. But all this is enumeration of difficulties, not reasons for condemning the finest Indian sporting fish to extinction in this finest fishing river.

Three years from now, all the runs and rapids, pools and cascades above Khara, where the Jamuna leaves the Shiwalik hills, will be devoid of this glorious fish, and we shall have Planning and the Planners to blame for this. We will remember this 'unkindest cut of all', as, old men, we recall the glorious days of sport in the Western Doon, when God's glaciers could find their way in free-ranging rivers to the thirsting plains below. When the curve of the blue-green Jamuna, and the Mahaseer on the curving line reminded us of happy days climbing and hunting in the hills near its source and the sources of the sister Tons.

And we will know, too, that Fishery Management is a dead, a stillborn, art in India. For Fishery Management, is the use of good judgement in getting the most out of fishery resources, for sport as well as for commercial fish. This will not have been done on the Jamuna, and possibly elsewhere, in areas we do not know so well.

As conditions become increasingly abnormal and artificial, we will hope that the uninspired bureaucrats who seem to control our destinies in a Kafka-esque nightmare of folly and misunderstanding, will see the light. We will hope that the pressure of political give-and-take will be superseded by facts and logical deductions based on research and irrefutable data, in the making of such decisions as the one taken to abolish the idea of having fish ladders on the Jamuna. We will hope that technical questions like these will be entrusted to people of technical competence inspired by amateur enthusiasm for the subject of their technique; that inventories, water characteristics, censuses, food and taxonomy studies, and new designs for ladders will replace the present-day arbitrary attitude, and that we in India will begin to think in terms of improving the stream and lake environment of the habitat of our wild things, instead of in terms of exploiting ruthlessly, thoughtlessly what Nature gave us.

Wild Life in Great Britain and India

The chief menace to 'Wild Life' in Great Britain is not, as in India, the poacher. The poacher exists as a professional type, like the burglar, but it does not make great inroads on the supply of wild life and he is opposed with success by the private game keeper, the village policeman and the forest department. In India, on the other hand unfortunately for its wild life, the poacher includes a very large number of people who should know much better—ex-landlords, the police, the armed forces and officials, from the humblest to the most exalted. Those who used to preserve game in India are now unfortunately not empowered to do so. Those on whose shoulders this duty now rests are in many cases not very keen and in any case inadequate in numbers and authority. Above all public opinion is not solidly behind them.

The chief offender in Great Britain is the scientist of the twentieth century. The farmer, the horticulturist and the forester are being inundated with powerful chemicals, insecticides, weedkillers and so for the while the highly toxic waste products of these factories flow into our rivers, poisoning the fish and the insects and vegetation on which the fish live.

Salmon, our noblest sporting fish, which used to run up many of our rivers, no longer do so due to pollution of the water. I have read of small streams in America used by the salmon for spawning poisoned, not by pollution from factories, but by an insecticide used to destroy an insect pest which attacked the Spruce trees on the banks of these streams. Many of these insecticides are highly efficient in killing insect pests, but they also kill the birds, some of them our finest songsters, and many of them eaters of harmful insects and seeds of weeds. For instance I have been seven months in these parts, right out in the country, surrounded by rich pasture, forest and moorland and I have yet to see a gold finch out of our most beautiful songsters, which feeds very largely on the seeds of thistles, one of our worst weeds. The song-thrush with its cheerful song in the depth of winter is now silent. I have seen only a very few individuals at our birds' feeding place where there were once scores and the song-thrush feeds almost exclusively on the slugs and snails that do incalculable damage to gardens and that eat these poisons. Not only do the small birds suffer, but even the birds of prey that act as useful control on the seed and fruit eating birds are becoming sterile through eating birds that have been poisoned by pesticides. The sparrow hawk is now a very rare bird and still more rare is that glorious falcon, beloved by the

devotees of falconry, the Peregrine, who, though it may take a certain toll of game birds such as grouse and wild duck is a most useful control over that real pest the wood pidgeon.

Myxamatoxis—I hope this is the correct spelling—an artificial disease of rabbits which we imported from Australia, very nearly exterminated our rabbits. Now they are gradually recovering somewhat, but in the meantime the old fox which used to prey upon them has become more than ever a poultry killer, though 'Reynard' is pretty sure of survival as long as fox-hunting survives.

It all comes about through the scientist imagining that his chemicals are a good substitute for the balance of nature, which he has badly disturbed. Educated public opinion is aware of this growing imbalance and questions are being asked in Parliament about it—an expression that has good deal of meaning in this country, where neither great political party can afford to ignore them.

Our game animals, such as they are, and our game birds, pheasants, partridges, the red and the black grouse, snipe and the wild fowl that haunt over rivers and estuaries are more or less safe and so are our fish for a very significant reason. Game in this country including fish is the property of the land owner. Very often he lets out his shooting rights to 'Shooting tenants' or to syndicates. The game animals and birds are, therefore, strictly preserved and in the case of pheasants and partridges often artificially raised. Our red deer, essentially the same animal as the Kashmir stag is found wild in two parts of the British Isles—Exmoor on the Devon and Somerset border, fifteen miles from where I live, and the Scottish Highlands. On Exmoor the red deer are hunted by the Devon and Somerset Staghounds, and, of course, warrantable stags only are hunted. Shooting is not allowed. Shooting an Exmoor stag is like shooting a fox in Lincestershire. Exmoor is now a National Park which also helps to preserve the deer from the poacher's gun. In Scotland the red deer lives on the forests which are not forests as we know them in India but bare mountains covered with short grass and heather. There they are not hunted but shot by the highly skilled art of 'stalking'. The owner of the 'forest' maintains a keeper who sees to it that the guest or 'shooting tenant' kills only warrantable stags, or stag with malformed antlers. Hinds are sometimes shot in winter so as to keep their numbers within reasonable limits since these barren mountains cannot provide food for more than a limited number of deer. Fabulous rents are often charged for these deer forests so that the red-deer thoroughly earns his keep both in sterling and dollars.

Since venison is very much a marketable commodity the temptation to poachers is obvious but the owner is protected by law, and the 'keeper' may and does invoke the aid of

the police. Poaching does occur particularly in winter when deep snow, on the mountains brings the deer right down to the highway side and gangs of townsmen with trucks have been known to operate, but it is certainly kept within bounds.

The red grouse lives on the heather-covered slopes of the hills in Scotland and Northern England, below the level occupied by the red-deer. These grouse moors are very much sought after by sportsmen and fetch such high rents that grouse-shooting is very much the sport of the well to do. The birds feed entirely on the seed of heather and their welfare thus depends a great deal on the maintenance of this glorious shrub in good condition.

Pheasants and partridges occupy the woodlands, parks and cultivation of the British Isles, along with our smaller deer, the fallow deer, introduced, I believe, by the Romans from Eastern Europe, the Roe-deer, and I am glad to hear recently, the barking deer from India. These are safe in the hands of the owners of property except where industrialisation and built up areas have destroyed the countryside.

Except on privately owned 'jheels' the sportsman may shoot wild-fowl, including geese, duck, snipe, curlew and other waders along the foreshore of our coasts and estuaries for no cost except that of a gun, cartridges and a gun license. Since the season of these mainly migrating birds is the winter it is a cold and wet pursuit for the real enthusiast only. All the same many thousands are shot, and to protect the various species certain well-kept sanctuaries have been established, as on the East Coast, in Norfolk and near Bristol.

The same methods control our fish population. A great deal of our 'coarse' fishing, fishing for species other than the salmon family, is either free or is controlled by vast associations, which hold competitions for literally thousands of working men during the coarse fishing season. Some trout fishing is free in the small streams of Scotland and Northern England. But the best salmon and trout fishing is in private hands, or in the hands of associations and syndicates and command very high rentals. Since the salmon and sea-trout spend part of their life in the sea netting at the mouths of the rivers they use for spawning is controlled effectively, so that a reasonable number of fish may each year ascend the river to perpetuate their species and to provide sport for the anglers in river or lake.

Bombing and deliberate poisoning of fish, such an unmitigated curse in India today, is unheard of even among the poaching fraternity. The greater part of our population are at heart cricketers and footballers, and though our gangsters will cheerfully rob a train of £ 2,000,000 there are some things which are considered not quite the game.

Though a good deal of beer cider in this part of the country, and whisky are still consumed our still growing city population still drinks a great deal of water and also, no doubt, washing is a good deal more frequent than it was in the middle ages. Gravel is also very much in demand for cement. For this reason there are an increasing number of reservoirs being constructed of all sizes from several square miles to a few square yards. The gravel pits, when dug out, also fill with water. Water plants and consequently water insects quickly colonise these excavations and the water companies have stocked them with brown and rainbow trout and have opened them to the public for fishing for a reasonable daily fee. On one or two of the larger reservoirs spinning is allowed but on most of them the rule is 'fly fishing only'; and it is soft fly fishing too. My old friends Gurkirat Singh Mann and Reggie Sawhney and also Mr. Malik, the warden of Fisheries Jammu & Kashmir, will be interested to learn that on 'fly only' waters fishing a fly with a spinning rod and a light fixed spool reel is very strictly forbidden. Owing to the excellent food supply on these reservoirs and gravel pits the trout run large. Five pounders are not unknown and I believe that excellent fishing is enjoyed, though the most favoured spots are rather crowded.

There are in Great Britain, I am not sure how many million television licenses for a population of about fifty million. Consequently the greater part of the population views television. The BBC organisation provides us with excellent wild life pictures, on an average once a week. One series showed us some of the well known rivers of England along with their fishy inhabitants; another entitled 'The Rare Ones' showed us a series of pictures, of superlative class, of many wild animals in different parts of the world, a third entitled 'Look' shows us essentially British Wild Life in its natural surroundings, wild cats (the nearest we can get to the tiger), badgers, hares, deer and many species of rare birds. The last two features are introduced or actively managed by that great 'wild-fowler artist and writer Peter Scott, whose books about wild geese and duck such as 'Morning Fight' must be known to many duck-shooting members of our Society. He now divides his time between wild life television trips and running a very successful sanctuary for wild geese and duck, which all goes to show that the best conservationists are almost invariably the old shikaris.

One of the very best films I have seen was approximately a ten minute sequence, photographed apparently at about ten yards, range of a number of Alaskan Brown Bears, fishing, and fishing with an invariable success which I envied for the thousands of salmon that were running up a small Alaskan river. The Alaskan Brown is about the same colour as our Himalayan Red Bear, but he weighs more than twice as much. The pictures were, I believe, taken in one of the Alaskan National Parks.

Now, I dislike 'Pop' music, and so when the Beatles or other 'pop' singers are televised, I incontinently switch them off. It is possible that some of the millions of viewers equally dislike wild life pictures and treat them in the same way. But making allowance for such vagaries of taste the fact remains that a very large part of our population must view excellent wild life pictures at least once a week, and cannot fail to be impressed, by the durability of maintaining our British wild life, as indeed wild life throughout the world.

India is still without this unique opportunity for wild life education, Television. Even when it comes to India it will be beyond the means of the main mass of the population for many years, until, perhaps there is no wild life left to preserve. As things stand at present our efforts to educate the masses are pitifully inadequate. The subject is not brought to the notice almost every day. Most States, I imagine, have a 'wild life week' once a year, in which lectures are given to educational institutions and to the general public accompanied by wild life films of various degrees of merit. This, of course, is very much better than nothing, and all praise should be given to the Forest Department for their labours in organising the week. But the public meeting is attended not by those in need of conversion but by the already converted—the Forest Officers and clerical staff and those who attend because they are already sufficiently enthusiastic in the cause of wild life. The people who need conversion, the personnel of the army and the P.W.D. and the villagers are not touched. I once gave a talk at a neighbouring school which was followed up by a so-called wild life film, almost certainly filmed in a Californian zoo. It showed a fight between a particularly mangy tiger and a python. The scene was said to be somewhere in Africa where I need hardly say tigers are not found. Besides conveying wrong zoological information it could not have possibly promoted any devotion to the cause of wild life. But some of the films particularly those by Mr. E.P. Gee, were admirable.

Is it impossible to approach the B.B.C. for the loan of some of their wild life films in such a worthy cause? And could not lectures and films be given and shown at village Panchayat-ghars and at regimental headquarters, with Hindi or Gurkhali comment or translation.

R. L. Holdsworth.

It Happened in India

The man was the legitimate contractor. He had taken the fishing rights to the Tons junction with the Jamuna with due process of whatever passes for Law with the Panchayat that controls this section of the erstwhile 'Society-Water'. His motor-cycle, No. UPS 7024, was parked by the bank. We heard ten successive explosions, evidently controlled with some degree of precision, from the way they followed one another, as though at a signal.

We were too late on the spot to see just what they had taken out, but two maunds of Kala Bans was being loaded into a truck standing by. Mahaseer, we suspected, had been deftly despatched a few moments before our arrival, for news had preceded us, as we are fairly familiar to the locals as sticklers for The Law.

Two Forest Rangers had not been despatched. They were still there, when we berated the overjoyed contractor. They were there, too, when he replied to our admonitions, "I damn care! Dare do what you will, who can touch me. I have permit." Indeed, he did have a chit of sorts, but the bombing of fish, we pointed out, according to the Indian Fisheries Act, 1897, Section 4 (I), was banned. We quoted, "If any person uses any dynamite or other explosive substance in any water with intent thereby to catch or destroy any of the fish that may be therein, he shall be punishable with imprisonment for a term which may extend to two months or with a fine which may extend to two hundred rupees."

Here, indeed, was intent, and execution thereof. Was this Act, then, a dead letter, like so many others?

(One can't help asking why these Blessed Gentlemen, if they are sticklers for The Law, did not report this matter immediately to the District Magistrate. Is their sense of duty a dead letter, or has it become a victim of the general despondency of the virtuous after Independence?.....Ed.)

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In the liquid light of a three-quarter moon, we scuffed our feet in the sand of the bank by the Asan Junction, gazing happily across the oily, gurgling, rushing waters. Suddenly, a loud boom and splash below us, was followed by excited chatter and a growing pile of fish of all sizes on the stones.

(What did they do about it, one wonders.....Ed.)

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I was fishing the Katapathar stretch of the Jamuna, when my suspicions were aroused by a group of men on the far bank. My wife said, though I disagreed with her that such things just did not happen in the Doon any longer, "Look, they are going to throw explosive into the river !"

And they did !

I dropped my tackle, and plunged into the river. The criminals, for such they became by their action, ran away as I emerged, shouting and gesticulating in a mad rage.

.....(We can't help liking our correspondent.....Ed.)

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It is reported that as a result of rivalry between two factions of the Kerala Congress Party some thousands of acres of forest land have been unlawfully occupied by peasants, not all landless. The active connivance of one faction-leader is broadly insinuated. It is further reported that this unlawful occupation of forest land is likely to be legitimised by *ex post facto* legislation.

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During a recent visit to several National Parks, in search of material for certain wildlife shots in a forthcoming movie I am making, I found that the wardens of these Parks, though hospitable and polite, know next to nothing about the wildlife in their charge. They seem to spend most of their time in smoking those Indian cigarettes wrapped in brown leaf, and drinking endless cups of tea. What struck me most as a foreign national was the utter indifference to their chosen field of work exhibited by these people without any show of embarrassment or shame.

And How They Do it Elsewhere

The death occurred in Iowa, U.S.A., of Paul Errington, who had devoted 30,000 hours to the study of muskrats, and to observing them in the field.

Conservationists are watching events in Michigan. The most thorough investigation of a (Government) conservation department I can remember was completed in December by a committee of twenty-one citizens and its recommendations have been largely adopted (by the Government). The Committee-study was initiated by friends of the department who felt that long-term planning, effective use of personnel, less of bureaucratic thinking might emerge from a realignment of field divisions under Regional Directors. These organisational changes would bring the Department back into closer touch with the public. The United Conser-

vation Clubs (of this one state of the U.S.A.) number 60,000 members, and the Governor, George Romney, who is tipped as U.S. Presidential candidate, will be watched for the decision he makes about the future of this Citizens' Committee by these voters.

(We do not even know, in India, what is the exact status and organisation of the Wild Life Department of each state. Repeated letters bring no response from certain states, while others are more co-operative.....Ed.)

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The Israeli Government is to set up a National Park in the Negev, an arid region in the south of the country. It will be on the lines of the Biblical Zoo of Jerusalem, and provide facilities for zoological study, research and recreation.

Theodore Roosevelt, President of the United States of America, wrote authoritative accounts of the wildlife of three continents, and personally mounted, with splendid taxidermy, several dozen species of birds.

Miscellaneous Notes

Corbett Memorial Prize Project,—Essay—1964.

At a recent meeting of the Society's Executive Committee, it was decided that this year's Corbett Prize would be restricted to residential schools which were members of the Headmaster's Conference; to the King George's schools and a few other similar institutions. No sectarian or parochial leanings were implied. It was just that the expense of organising the Prize on an All-India basis each year was felt to be beyond the Society's means.

Accordingly, we circulated the following letter and particulars to some fifty schools in the country.

We are sorry to have to report a distressingly poor response. Only five Headmasters have so far replied to our circular, and the last date for receiving entries is only 6 weeks away at the time of writing.

We hope more schools will participate in this. If even residential schools do not, then it might become necessary to abolish the Prize, since better response can hardly be expected from other schools, with poorer organisation and staff, and fewer leisure-activities.

Sub:—Corbett Memorial Prize on Wild Life—1964.

I trust you have heard of the Wild Life Preservation Society of India, its laudable efforts and activities for the dissemination of knowledge regarding Wild Life, and the conservation of Nature generally.

Working on the principle that young bamboos are easiest bent, the Society has decided to organise a Wild Life Project/Essay for young people in memory of the late Major Jim Corbett, whose surviving sister and life-long companion, Miss Maggie Corbett, has donated a sum of money for this purpose. We have given a matching donation and the result is the Corbett Memorial Fund for this Project/Essay.

I do hope you will be able to find some enthusiastic member of your staff who will be able to take personal interest in this most desirable activity and induce some, at any rate, of your boys into finding creative joy in this.

Apart from this specific Project/Essay, I am enclosing under separate cover, a Brochure issued by the Society containing a membership form. All of us here and all over India look forward to your participation in our activities, since your precept might well enthuse boys and masters, where long letters and costly publicity might not. In this hope I am also including under separate cover, a sample copy of our half-yearly Journal, The "Cheetal", and look forward to receiving the completed form soon. The "Cheetal" is fast becoming an authoritative, if belated, organ of conservation-mindedness in India, and the Govt. of India have finally recognised us as such by offering a much-needed recurring grant-in-aid. With best wishes.

(Hari Dang)

The Editor, The "Cheetal",
The Doon School,
Dehra Dun.

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Corbett Memorial Prize Project/Essay 1964.

For
Public Schools;
Sainik Schools;
King George's Schools.

To commemorate the late Jim Corbett, Conservationist and Hunter, the Wild Life Preservation Society of India is organising an Annual Wild Life Essay/Project.

The Project is envisaged for pre-School-Certificates boys/girls. A maximum of two students might work together on this Project/Essay, but assistance, other than guidance, by staff members is to be avoided.

It should deal with any aspect of Wild Life, Forest, or Nature Conservation generally, e.g.

(i) Observation of birds throughout their complete breeding cycle or of any interesting aspect not found in books.

(ii) Photographing Wild Life.

(iii) Measuring, recording and taking plaster casts of foot-prints of Wild Animals or Birds.

(iv) Observation of the behaviour and habits of species of Wild Animals or Birds over a period of time.

(v) Putting up nesting boxes, planting fruit trees, making bird-baths, making dams for storage of water for animals, and fish-breeding, etc.

Interesting and original work will be appreciated more than mere literary language or facts quoted from books.

All entries should reach the undersigned by the 30th of April 1964. The prizes will be awarded in May or soon thereafter. They will be in the form of books, including two consolation prizes for promising entries.

Corbett Memorial Essay/Project,

C/o Hari Dang,

The Doon School,

Dehra Dun.

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Wild Life Terminology and Nomenclature

We have received a very helpful and constructive letter from Mr. E.P. Gee, of Assam, on the subject of the spellings and names which should correctly be used in India.

Though we are in complete agreement with him when he suggests uniformity and accuracy, as in his preference for 'wild life' over 'Wild Life'; blackbuck over Black Buck, small initial letters over capitals for mammals, e.g., thar, ibex, leopard, instead of Thar, Ibex and Leopard, we have our doubts about the wisdom and validity of perpetuating certain 'Koi Hai' spellings which have become almost traditional in Indian English.

In suggesting as a Reference Manual the 'Checklist of Palaeoarctic and Indian Mammals' 1951 by Ellerman and Morrison-Scott, Mr. Gee would like us to use 'goral' and 'sambar' instead of ghooral and sambhar. We are not scholars of all the diverse dialects and argot of Hindi, but we can differentiate the rugged 'r-r-r' sound and the 'र' of Hindi, from the simple 'r', as also the explicit 'b-h' sound in an Indian pronunciation of the word 'sambhar', from the more angled and simple 'b'. Now, we pride ourselves on having removed all trace of linguistic or any other sort of group snobbery from our attitudes, and are often accused of being more English than the English, but we just cannot see ourselves going around saying 'sambar' and 'goral' with artificial poise, when we thrill only to the sound of 'sambhar' and 'ghooral' from the lips of our village 'shikaris'.

Mr. Gee has kindly sent us some of his publications on these standardised terms and spellings, and much useful advice. We are grateful, and a proposal is under study to compile a truly rational and definitive work in this connection. We await the publication of Mr. Prater's Revised Book of Indian Animals, as we believe that will give us further pointers.

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Wild Life Stamps

On the occasion of the celebration of National Wild Life Week last November, the Government issued certain highly artistic and well-produced postage stamps in the common denominations. The Rhinoceros, the Lion and other pictures gained admirable verisimilitude through being printed in natural colours.

Since this idea has finally been accepted in principle, it should now be easier to take the next logical step of trying to raise funds for the Cause through laying aside a portion of the Revenues gained from the sale of these postage stamps during Wild Life Week for wild life work of all sorts. Chairs could be established at Universities, and Fellowships and Scholarships offered from the funds thus collected. We can think of few more worthy causes, and the Postal Department would hardly feel the pinch.

From the States....

Orissa:

Are tigers prone to hypnotism? From a Correspondent in the wilds of Bastar comes the news that a local Gond medicine-man exercises some occult power over tigers in the area of his tribal bastis. Hitherto he has not used his power to extort anything more than an ungrudging respect for his powers from his folk, but it is said that at instructions from him, tigers

go rampaging through the villages, lifting cattle and generally frightening the already harrassed folk. Till now, it was elephants that were their chief bete noire, now it is tigers; Beware !

Bengal:

The craze for lizard-skin bags and shoes in the United States continues to exact heavy toll of the Monitor population of Bengal. We are informed that the export of these skins, salt-cured and green, reached a new high recently. In side streets off Dharamtola, vast godowns are stacked with these skins. Groups of expert workmen scrape from ten to five, and stack up hundreds of these skins for despatch to the U.S.A. The snake population is rising to unprecedented numbers as a consequence of the trapping of so many of their chief predator, the Monitor, which eats up the eggs of snakes.

We always do talk of the Balance of Nature, and The Society is publishing the Snakes and Ladders game which illustrates this balance; here is a concrete example of the danger of disrupting this balance.

Uttar Pradesh:

Stories are multiplying of instances of people being marooned and often assaulted by wild elephants. We ourselves helped five Gujars off a huge 'sandan' tree near Motichur last month, by firing off a few rounds in the air. The tusker and two cows had adopted the patch of thick forest near the Rest House as their ground and would not budge. The Gujars, having failed to dislodge the elephants, were forced up the tree, and shouted for help.

We have already made recommendations in this regard; that wild elephants in India will have to be systematically reduced and controlled.

Close upon the news that a man-eating tiger, the Terror of the Terai, which had killed twelve human beings, had been destroyed by a police constable, comes the news that another man-eater has been operating in the Kalagarh Division of the Western Circle of U.P., and has claimed four victims. The occurrence of man-eaters may be merely through the chance of unhappy encounter with a porcupine, but when large numbers become man-eaters, the indications are that some disruption in the balance of game animals may be responsible. We can think of no such evidence in this state, for game in the Western Circle is said to be on the increase.

Assam and Bihar:

From both states comes news that panthers are being ruthlessly hunted down as the price of salt-cured panther skins has gone up phenomenally in the export to Europe and the U.S.A.

We, too, have noticed that the fashion pages of European and American magazines are increasingly featuring furs as the fashion, so it is evidently, Panthers, Beware !! Ceylon, we note, has banned outright the export of panther and bear skins.

Maharashtra:

A Correspondent writes: I had gone out partridge-shooting in December, when a panther (of sorts) charged me through a beat. I emptied both barrells at close range, and he went growling and slithering down a 'nala'. On investigation, the animal turned out to be only about five feet from nose-tip to tail-tip, but all his teeth were almost worn, as through old age. Is this a leopard or a panther, and what is the difference ?

(The panther and the leopard are identical; the only difference is one of size, though several variations, of colour, texture, size, roseattes add to the variety of skins we have seen. We would suggest that our Correspondent has shot a 'Khandala' leopard; a village-goat-killing-type, much smaller than, but zoologically indistinguishable from, the panther.....Ed.)

Assam:

We have several reports that the wild life of the areas where military activity is concentrated has been almost wiped out. We hear, too, that the Serow has been a grave sufferer in the Naga hills division.

(See article on mountain fauna: Ed.)

Himachal Pradesh:

There is reported slaughter of ibex from the border areas of this border state. The matter is being investigated through correspondents.

Wherever roads penetrate, the wild life is bound to be threatened, specially mountain fauna, which cannot withstand heavy hunting pressure. We know very little about Himachal Pradesh, but are gathering what material we can on these reports. Perhaps, some readers will help.

Kashmir:

We know that the magnificent Hangul was becoming scarce. Now we hear that even in its Sanctuary, an instance of poaching has been brought to light. Near Dachigam, a hind has been reportedly killed with staves by villagers.

Wild Life of one World

The Kariba dam, which flooded many square miles of the finest animal country in Africa, was prevented from leading to utter tragedy by the prompt and effective work of various wild life agencies. They have just rounded up their campaign of saving hundreds of animals in a unique operation. Even the incredibly huge rhino, were successfully knocked-out with syringe guns and transported across the waters around the marooned islands, and left on dry ground and safety!

The inhabitants on Tristan da Cunha, who returned to their island home after two years, found that after the earthquake that sent them packing, their domestic animals had gone some way back to their wild state. Dogs ate up the sheep, and ran wild in a story reminiscent of Jack London's White Fang. Seal, that had not bred on the island for years, resumed their breeding.

This raises the issue of just how domesticated are domestic animals? Feral cattle and horses are known to become quite wild. Another field that would repay closer study!

The rare and interesting Clouded Leopard (*Neofelis nebulosa*) is not a leopard. It belongs to the family of long-tailed, short-legged cats. Very little is known about this animal. In our efforts at obtaining reference to this shy animal in works of the past, we have found little encouragement.

The news that a litter of three has recently been delivered successfully at the Frankfurt Zoo is thus doubly welcome. In the past litters of the Clouded Leopard have never survived unless reared artificially. We will look eagerly to the future of this litter.

To catch a baby Orang-utan (*Pongo pygmaeus*), one must first kill the mother, for she is truculent in the extreme in the defence of her young. Unscrupulous zoos all over the world have been acquiring these strange anthropoid apes from Borneo and Sumatra, but this acquisition is destructive, since Orangs do not easily breed in captivity. The World Wildlife Fund has been financing Mrs. Barbara Harrison in her work of buying baby Orangs from the poachers who supply them to the zoos, and then returning them to the forest.

And 'Flame' is the Falcon

And Flame was the falcon. From the Doon past Mussoorie and right into the heart of the Himalayas, the sun shines over the birth place of the most noble falcon in the world. Snow capped, green Himalayan giants thrusting uncouth shoulders into the cobalt sky are not only the soul of India and the souls of those who have attained everlasting happiness, where they drink "Amrita" within the dazzling radiancy of 'Swarga', but also the home of this proud and mystic falcon whose story is heartrending in its pathos. For the story of Flame is written in pain and sorrow. There have been many other falcons in my life and their story does not matter very much. Their stories are recorded by the fleeting ghosts of memory. The story of Flame will be entered in the book of humanity.

In the world of mountain, forest and river, a world in which Flame for the first time opened its eyes there exists the most wonderful handiwork of nature. And it was in such surroundings that one fine day Flame opened wide its pretty wings and flew into the cruel world. It flew over Birch and Pine forests, over snow clad peaks, over green dales and water falls, and it flew into the emerald valley: the Doon.

At the point, where during the rainy-season, the waters of Nalapani Rao jostle the Rispana river, there, during the winter in the dry bed may be seen a solitary Semul tree—a conspicuous landmark and one which like a golden magnet draws wild hawks from far and wide. It was at this point that I first made the acquaintance of this ill-fated Shahin Tiercel which I later caught and named Flame. Right from the start I fell madly in love with this handsome falcon. For Flame was a falcon of great distinction. Also, it had the quality of endearing itself so much to me and so deeply instilled became its love in my heart, that the tragic circumstances under which it was ultimately lost leaves in my mind the deep furrow of a trauma which will take a lifetime to heal.

Flame did not take long to train, for he started to fly to the lure within a fortnight of his date of capture. Every falcon had one good point or another but Flame had them all, and then some. It was now a matter of another few days and I would have had him flying at game had not ill-luck intervened.

Late in the evening one day, when it had become so dark that even two paces ahead could not be seen, I was returning from a walk in the country. The way was rough and long and the darkness which swiftly gathers after sunset in these latitudes, made visibility

extremely poor. In order to get home as quickly as possible I decided to take a short-cut. In the inky darkness I lost my bearings and was unable to keep to the beaten track which followed the banks of a dry river bed. Here, Rispana Jee, in many fits of turbulence has eroded deep channels and has left them dry after each rainy season. Sometimes these ravines are so deep that a man standing in one such gully does not even show his head above the surface of the surrounding land.

With Flame on my fist I unknowingly stepped off terra-firma and into one of these gullies. Before I could pull myself together I was falling headlong into the horrible trap. It is very commonly believed that a man falling in dark waters and about to be drowned sees his whole life pass before his eyes in a skyrocketing sequence as he stages a final flight into the unknown. No such experience is shared by a person falling into a deep dry ravine. The only sensation I was aware of was, that I was falling, and falling, and falling. The clock must have stopped momentarily and the ravine bed that met me rose slowly, accursedly and painfully slowly, till finally, with a sickening thud I embraced it. No pain as yet, no dizziness; only a wall of darkness shooting into my brain and obliterating all else.

I woke to the clamour of bells; falcon's bells retreating and receding into the black void. And these were Flame's bells, bells that tolled the knell of doom for my pretty hawk. Actually what happened was that the unceremonious somersault combined with the final impact at the river's bottom smashed loose my hold on Flame's leash and jesses. The momentary black-out completely relaxed my grip, and poor Flame not knowing what had happened took fright and flew away with swivel leash and jesses. As the sound of bells faded in the distance, so also faded my hopes of ever meeting my faithful bird alive once more. Stunned, bruised, and badly lacerated around the knees, I stood up and started rushing after the sound of the elusive bells, till my progress was cut short by another gully and another fall. Afterwards there was nothing to follow as the guiding bell notes had ceased altogether. Very slowly I once again stood up and was still staring in horror in the general direction of the place where the muted ringing of the bells had died away. I just felt like someone who accidentally sets his own property on fire and stands before the smouldering ruins. Later on that night I covered many miles of country on foot, always listening, always hoping to hear the familiar and welcome tinkle of bells, which now remained the sole guiding factor in the forest of the night. But there is a limit even to endurance and it was towards midnight that, sore in body and still more sore in mind, I crawled back to my home. There was no sleep for me that night. For how could I sleep when I knew that somewhere on some tree would be Flame, hanging head down and gasping its last.

By four in the morning I was out of bed and in that damp and frosty dawn again set forth to search. It was like trying to find a needle in a hay stack. The small grey hours of dawn slipped by and soon the glorious luminary lighted the eastern sky. The first rays of the sun caught the treetops and the darkness which had so far cunningly concealed, now brought forth to the light of day a sight of that riveted me to the spot. There hanging from the top of the tallest tree was unmistakably my old companion. The crimson plumage of his breast caught the inclined rays of the sun and reflected them in a flame of red colour. With trembling hands I raised the binoculars to my eyes which now rested on a familiar object. I looked up at the lifeless eyes that were staring down at me through the mosaic pattern of tender leaves. I suddenly recalled how shapely those beautiful primary feathers once looked and how they had worn down due to a constant thrashing of wings in an effort to break loose from the death-trap. These wing feathers in the short period of a single night became worn and broken at the tips. What great distance these wings had flown since they first sliced the air above the eternal snows of the Himalayas. I know all the ways they had come; they had beaten over the clean snows, the pine forests on the snow line, the flowery slopes below the alpine vegetation, over hills and valleys, over land and river. And the canopy of the sky had always been there. Struggle, the struggle for life had broken and chipped the primary feathers of the wings. All of a sudden it became maddeningly clear; I calculated perhaps ten million wing beats lying behind this noble bird. These wings had ultimately reached their final destination and were now dropping, unsightly, consumed and worthless, with the pencils of light shining through them. For Flame had left his feathers and his body behind. Suddenly I became aware of tears streaming down my face. Pressing my forehead against the tree trunk I stood motionless. But Flame will never be allowed to die. Flame will never be allowed to fade from my thoughts like the colours from the petal of a rose, or the notes of a universal orchestra. Flame is not simply a word written in the blue sky. The memory of FLAME will always leave unashamed tears in my mind, till we meet again in the happy hunting grounds. 'Allah Karim': God will provide.

Prince S. M. Osman.

Helpful Hints Wherever you Travel

Do not put alligators in the bathtub

It is bad for them.

Do not put gnus in shoes

It wears them out.

Do not give lighted cigarettes to rabbits

Or anything else that is habit forming.

Do not step on cats? any more than you can help

And if one is by chance in a chair you are

Thinking of sitting down on, then

SIT SOMEWHERE ELSE.

Do not ask directions of Giraffes

It is all they can do to keep track of themselves.

Do not keep canaries

(How would YOU like to be kept?).

Do not tease caterpillars or rub them backwards,

They have their errands to do and want to get on with them.

Do not count sheep

They do not count you.

Do not stare at zebras

It weakens the eyes.

Do not wrap pythons about your neck

Or play music to cobras you meet in the street

Their tastes may be different from your's

In such matters.

Do not eat eagles

It is unpatriotic and inelegant.

Whenever you have the chance, aid the ape.

If there are peacocks in your yard

Give them your card and tell them to come back

On Saturday when your in-laws are absent.

Do not raise your voice but close the gate firmly

And they will go away.

Lions and bison should be treated nicely

And not lied to, because they are bigger than you.

Don't turn on turtles

Pick up oysters politely.

Don't worry urchins

Brush Bassets nightly.

All these rules are good to remember

Whether you are travelling Venice or the Netherlands

For it is upon such principles

That pleasant relations are established

And good times are had

Between Animals and Man.

Pati Hill,

From 'The Snow Rabbit'.

The Nilgiri Wild Life Association.

We publish below relevant extracts from the Annual Report of the Association as a model of what can be done even in existing Indian conditions.

SHOOTING

Preservation of Wild Life through well regulated shooting met with more opposition during the year. Although the Association has proved that wild life could be preserved successfully and well through regulated shooting, since it has become a fashion, the clamour for giving protection to wild life by closing down all legitimate shooting continued. But few realise that this type of protection will be merely on paper and will work to the detriment of wild life (except in strategic, compact and heavily staffed areas). It must, however, be realised by the sportsman that it is hard, if not impossible, for the public to understand how shooting can preserve. It is, therefore, the duty of every member who is interested in preserving wild life effectively to not only observe the rules strictly but to explain to the public whenever opportunity arises how wild life is and could be preserved by regulated shooting. Unless this is done the day is not far off when the officials concerned will be forced to yield to the demand of a section of the public and stop all legitimate shooting.

To prevent commercialisation of sport the following new rules were introduced as conditions 30 & 31 of the conditions of licence:—

- (30) The selling or offering for sale or marketing in any way the flesh of animals or birds shot by the licence holder is strictly prohibited.
- (31) No licence-holder shall hire out his services as a guide or otherwise for purposes of shooting. Nor shall a licence-holder hire the services of any person who is not a registered shikari of the Association or a bona fide beater or coolie.

To prevent the use of poison etc. the following condition was introduced as condition 32.

- (32) The use of poison, dynamite or other explosives (licensed fire arms of game licence holders excepted) and the setting of traps and snares for capturing or killing any wild animal or bird is strictly prohibited.

In order to restrict the beating of jungles in the low country condition 26 of the conditions of licence was amended to include the low country also. The present condition reads:—

- (26) Beating, use of dogs etc.—(a) All hunting with beaters or dogs (whether for big or small game) is limited to two days a week.

- (b) A week is defined as from sunrise on Sunday to sunset on Saturday.
- (c) Part of a day counts a whole day even though no shot is fired.
- (d) The number of dogs used for beating for big or small game and tiger, or panther, pig, wild dog and deer shall not exceed ten to each party.
- (e) Any number of wooden rattles to each party may be used for beating.
- (f) When beating for tiger or panther no other big or small game may be fired at.

It was proposed at the meeting of the State Wild Life Board held in Ootacamund in May 1962 that shooting of Nilgiri Tahr (Ibex) and tiger should be closed. Although the motion was carried the Nilgiris was exempted, thanks to H. H. The Maharajah of Porbander, Mr. J. A. Master and the Honorary Superintendent who took great pains to explain to the board that the closing down of shooting of these animals will not be in the interests of their preservation.

At the same meeting of the State Wild Life Board a proposal to extend the Mudumalai Wild Life Sanctuary to cover the Sigur Range would have been passed had not Sri J.A. Master and Honorary Superintendent made vigorous pleas for the retention of the area with the Association.

But subsequent to the meeting a certain member of the Board would appear to have prevailed upon the authorities concerned to close the area. A Government order to this effect was issued and the Association is vigorously fighting its implementation not only in its own interests, the area being the only open area in the low country in the Nilgiris, but in the larger interests of the wild Life in the area which can be effectively preserved only by regulated shooting.

In this connection apart from correspondence with the Government, delegations consisting of members of the Association waited on the Ministers for Forests, Finance and Publicity. Villagers in the area and the low country shikaries have also protested. Orders are awaited.

The Association's thanks are also due to Mr. K.K. Kalingarayar for his efforts to keep the area open.

A census of Nilgiri Tahr (Ibex) on the Nilgiri Plateau was taken in January 1963, under the direct supervision of the Honorary Superintendent. The Ibex country was divided into 4 blocks and 4 parties set out at the same time to do the counting. Every precaution was taken to avoid duplication.

Nilgiri Tahr live among the cliffs and if undisturbed come up during the day to feed on grass on the mountain tops. Therefore the visual method of counting is best suited and was adopted in taking census. Binoculars and telescopes were used as aids. The Ibex actually seen and counted amounted to 292. On a very conservative estimate it may be said that at least a third of the number escaped observation on account of unfavourable ground, wind and weather conditions. Therefore it can be safely estimated that there are about 400 Ibex in the Nilgiris. The Ibex are thriving, there is no doubt.

The largest herd consisted of 38 animals. Several fine saddle backs and brown bucks were seen. There were lots of young ones too.

The Glenmorgan herd has completely disappeared, thanks to the ban imposed on shooting! No Ibex were seen in the Nilgiri Peak area. It is reported that this is because of poaching by the estate coolies. Licence holders would be doing a great service by frequenting this area.

Kundah Hydro-Electric Scheme roads are being laid in the Ibex country and Forest Wattle Plantations are also being pushed through. Poaching activity is therefore expected to increase. This seems a crucial stage in the protection of this species. In conclusion it may be stated that unless the licence holder is allowed to pursue the saddle back most of which are useless for breeding purposes, and thus patrol the area, there is no doubt that our Ibex will eventually share the fate of the Glenmorgan herd.

As the peafowl has been named the national bird there is no likelihood of the ban placed on the shooting of this bird ever being lifted. Therefore no further representations were made.

The track to Chemmanathan which was maintained by the Association all these years was closed to the licence holder as a very small stretch of the track passed through the sanctuary. The representations made by the Committee to have it opened proved to be of no avail.

The club licences issued to the Defence Service Staff College, Wellington and the Madras Regimental Centre, Wellington were discontinued at the instance of the Chief Conservator of Forests, Madras.

Representations to re-open at least a portion of the Avarahulla Reserve Forest which was closed to shooting in 1959 for 3 years as an experimental measure, also proved to be ineffective.

On representations made by the Association, the Government sanctioned the installation and operation of an Anti-poaching gate across the Sigur Ghat Road, at Sigur to prevent motor car and other poaching between Masinigudi and Sigur. A gate was accordingly opened. Shortly after this gate was put up the Forest Department installed a similar gate a few miles

above the Association's gate on the same road. As the existence of two gates on the same road within a few miles of each other caused considerable inconvenience to the bona-fide traveller, the Government has been approached to permit the closure of the Association's gate.

The Honorary Secretary who is also the District Forest Officer, took steps to prevent poaching.

A sub-committee was formed to go into the question of building a Game Hut in the low country, near Mavinhulla.

The unfortunate death of a sambhar hind and a young stag due to grazing on ground sprayed with Weed Killer was brought to the notice of the Committee. The use of poison for killing weeds is on the increase and has become a new source of danger to wild life.

Denudation of forests and the killing of game on patta lands continued to constitute the greatest menace to Wild Life.

There was more tiger activity on the plateau as compared to the previous years. Wild dogs were rarely seen on the plateau. Sambhur are increasing. Nilgiri Tahr has been dealt with already.

In the low country spotted deer continue to be plentiful. Sambhur population is increasing as is evident from the number of hinds and fawns seen. But shootable stags continue to be shy. Gaur or Bison are also on the increase, but shootable bulls were scarce in the shooting area. Tigers and panthers although active were cunning and elusive as usual. Wild dogs were very destructive.

Offences:—

A statement at the end of the Report shows the cases dealt with during the year under report.

Of the 115 Season Licences issued 67 were taken by residents and 48 by visitors.

Of the 20 Monthly Licences issued 2 were taken by residents, and 18 by visitors.

Of the 8 Weekly Licences issued all were taken by visitors.

The Season Licence fee was Rs. 60/- plus deposit of Rs. 10/- and Rs. 50/- (for visitors). The rate of short term licences in issue were as follows:—

Monthly (Big and Small Game) Rs. 80

Weekly (Small Game) Rs. 15

With proportionate deposits of Rs. 10 (Rs. 20 for Visitors)

and Rs. 5

Big Game:—**Comparative Statement of Big Game shot by Licence Holders.**

	1959—60	1960—61	1961—62	1962—63
Bison	2	—	3	2
Sambhur Stag	5	6	12	14
Ibex (Saddle Back)	6	1	—	3
Chital Stag	49	54	46	38
Tiger	4	6	—	4
Panther	—	3	1	6
Jungle Sheep	27	16	12	20
Bear	3	—	1	1
Total	96	86	75	88

Small Game:—

The following statement shows the number shot with comparative figures for the previous years.

	Season 1960—61			Season 1961—62			Season 1962—63		
	Plateau	Plains	Total	Plateau	Plains	Total	Plateau	Plains	Total
Jungle Cock	87	82	169	67	94	161	61	81	142
Jungle Hen	56	76	132	25	59	84	29	86	115
Spur Fowl	14	37	51	16	15	31	7	33	40
Partridge	19	35	54	7	20	27	13	30	43
Quail	3	2	5	—	2	2	—	2	2
Woodcock	55	—	55	49	—	49	36	—	36
Snipe	63	219	282	57	309	366	20	212	232
Wood Pigeon	133	40	173	86	14	100	156	5	161
Hare	73	83	156	73	38	111	62	45	107
Total	503	574	1077	380	551	931	384	494	878

Vermin:—

The following Vermin were destroyed, the figures for the previous years given for comparison.

	Season 1960-61		Season 1961-62		Season 1962-63	
		Rs. nP.		Rs. nP.		Rs. nP.
Wild Dogs	11 Adults	220.00	6 Adults	120.00	6 Adults	150.00
Wild Cats	13 Full grown	41.00	15 Full grown	60.00	1 Pup	12.00
	2 Half grown	4.00	4 Half grown	8.00	7 Full grown	28.00
Red Mongoose	3 Full grown	16.00	2 Full grown	12.00	1 Half grown	4.00
			1 Half grown	3.00	1 Full grown	6.00
Grey Mongoose	5 Full grown	17.00	4 Full grown	16.00	1 Full grown	4.00
	1 Half grown	2.00	1 Half grown	2.00		
Crow Pheasant	6 Full grown	17.00	4 Full grown	12.00	4 Full grown	12.00
Harriers	1 Full grown	3.00	—	—	—	—
Eagle Hawks	—	—	3 Full grown	9.00	5 Full grown	15.00
Sparrow Hawks	1 Full grown	2.00	—	—	—	—
Otters	—	—	—	—	2	10.00
Total	43	322.00	40	242.00	28	241.50

Fishing:—

The monsoon was late and the lakes did not fill up. Fishing during the post monsoon period was not as good as it should have been. The newly formed reservoirs of Avalanche and Emerald were very low in summer and the casualties were many. Anglers, particularly visitors to the Nilgiris had excellent sport, if it can be called that, during this period.

General:—

The Nilgiri Fishing Rules were not renewed even during this period and the several reminders to Government produced no result. In spite of this handicap and the resultant uncertainty the Association continued to safeguard the fishery effectively.

The labour employed on the Kundah Hydro-Electric projects constituted the greatest menace to the preservation of the Trout and had to be watched all the time. They were particularly active during the spawning season and the summer when fish congregated in limited areas. Had not the Association with the active help of the Forest Department taken

effective steps to stop poaching by these labour most of the trout in Avalanche and Emerald would have been lost.

A temporary additional watcher was appointed for Avalanche and Emerald during the summer.

Dams are now being built across the Parsons Valley Stream, the Krurmund River, King Dhar stream and Billithadahulla. More vigilance is called for.

The movements of the fishing licence holders greatly contributed to the preservation of the Trout Fishery.

Some more snags which were taking a heavy toil of fishing tackle in Emerald and Avalanche were removed.

Spawning beds were prepared in the Mukerti River.

The Association represented to Government that it would be desirable to give anglers and the Association representation on the State Fisheries Advisory Board. The request was turned down.

The proposal to provide fish ladders in the hydel dams across the Parsons Valley stream and the Krurmund river was given up as not absolutely necessary.

A channel was dug in the Krurmund River bed to provide an escape route for 100 and odd trapped fish.

More boards were put up.

Fishing was very popular as the fee realised from the sale of the licences would show.

New Conditions:—

Since taking out fish spinning when the water level was low and the fish in distress was considered un-sporting and not in the interests of the preservation of the Trout Fishery a condition was introduced to prohibit spinning during the 2 summer months between 16th April and 15th June.

The use of bubble and other floats and weights and spinning reels in fly fishing was prohibited.

Close Season:—

The Mukerti river, and certain sections of the Avalanche and Emerald Reservoirs were closed to fishing last year during the spawning season.

Stocking:—

The following stream was stocked with trout for the first time.

Emeripuzha—with trout from Bhavanipuzha. Emeripuzha is about 5 miles beyond Bangitappal en route to Nadgani and Sispara.

Trout put into the King Dhar stream, Tirupanthorai Stream and Emeripuzha are reported to be flourishing.

These and other newly stocked streams will be thrown open for fishing after 31-12-1963.

The following waters were re-stocked.

King Dhar stream with Trout from Upper Krurmund.

Tirupanthorai Stream with trout from Arokiampuzha.

Bag and size limits:—

The weight limit prescribed last year was given up as it did not work very well and could not be enforced effectively. Instead the following new bag limit was prescribed.

Avalanche Reservoir including streams falling into same

Emerald Reservoir do do

Mukerti Reservoir do do

Peermunnd Pond do do

} 8 trout each

All other trout waters—20 trout each provided that in no case the daily bag limit of 20 fish is exceeded.

(For the Statement, See Page 35)

Statement of Offences under the Forest Act and Breaches of Shooting and Fishing Rules from 1-9-'62 to 31-8-'63.

Serial No.	Date of detection	Name of Range	Nature of offence/ alleged offence	Name of offender/ alleged offender	By whom reported	Remarks
1	3-9-62	Ootacamund South	Illicit spinning in fly fishing Water	P. Sarknam	Watcher Subramoni	Case compounded
2	2-9-62	do	Illicit fishing in Emerald Dam	Arumugam and another one	Watcher Subramoni	Case compounded
3	26-9-62	do	Illicit fishing in Avalanche	Swaminathan	Watcher K. Rajie	Case compounded
4	30-9-62	do	Illicit fishing in Porthimund	George	Watcher Subramoni	Case compounded
5	10-10-62	do	Illicit fishing in Emerald Dam	Muthan	do	Report awaited
6	19-10-63	do	Illicit fishing in Emerald Dam	Muthan	do	do
7	31-10-62	do	Illicit fishing in Emerald Dam	Krishnan	do	do
8	6-1-63	do	Illicit fishing in Parsons Valley	M. Mukerjee	do	Compounded
9	11-1-63	do	Illicit fishing in Avalanche	Sanagam and two others	Watcher K. Rajie	Report awaited
10	16-2-63	do	Illicit fishing in Emerald Dam	Ramaswamy and another one	Watcher Subramoni	do
11	23-2-63	do	do	Mathan and 3 others	do	do
12	6-3-63	do	do	Okkadu and 3 others	do	do

(Contd.)

Serial No.	Dated of detection	Name of Range	Nature of offence/ alleged offence	Nature of offender/ alleged offender	By whom reported	Remarks
13	25-3-63	Sigur	Illicit fishing in Moyar	M.A. Guruswamy and 3 others	Range Officer Sigur	Prosecuted
14	5-4-63	Plantation II	Illicit fishing in Avalanche	Okkadan and 9 others	Watcher K. Rajie	Compounded
15	25-4-63	Ootacamund North	Illicit fishing in Sandynullah	Raman and 2 others	Watcher Sundaram	Report awaited
16	16-6-63	Plantation I	Illicit fishing in Parsons Valley	Philip	Head Watcher P.A. Clapton	Compounded
17	24-6-63	Ootacamund South	Illicit fishing in Upper Krurmund	Gopalan	do	Prosecuted
18	31-7-63	Ootacamund South	Illicit fishing in Parsons Valley	Velayuthan	do	Compounded
1	10-10-63	Ootacamund South	Illicit killing of a sambhur	Korakundah Estate Coolies	Watcher Sivalingam	Report awaited
2	30-3-63	Sigur	Shooting of hare after sunset	Sri A.H. Abdul Rahaman Sait	Watcher R. Subbon	Under investigation
3	15-3-63	do	Exceeding bag limit-- Spotted Deer	Mrs. Khatau	Range Officer Sigur	Compounded

(How we would like to be in a position to submit similar reports for our North Indian areas. It is evident from the Report that very signal service is being done by the Association in the Cause. The reference to blanket condemnation of shooting being harmful to wild life is symptomatic of almost all right-thinking wild life agencies. How often have we iterated the fact ourselves.....Ed.)

Wings

BY C. VANSHEV UKIN

From: "IZVESTIA" 16-12-62

For long he lived in captivity
It rained, the snowstorm whistled—
Not in peace, but in great pains.
Than from an invisible wound.
Severely they ached, when opened
Wings—but the wings
He himself straightened
And rose with scornful tears,
Saw in the dark night,
And believed: here justice comes to him.
The snub-nosed guard in great coat
Opened the door for ever
And the vaults rang
From the flappings of these wings.

Translated by G.K.G. Joshi

For the Wildfowler—I

The Spot-Billed Ducks of India

Anyone who has had the good fortune to go Wildfowling in India, with either gun or camera, will I am sure have seen the Spotbill, a large grey duck, its rather long neck and very colourful beak markings in yellow, black and often red making it easily recognisable. But I wonder how many stop to examine it closely enough to realise that there are three distinct types, (three different species perhaps all-over India?) definitely in Assam where these observations have been made.

Sketch No. 1—Indian Spot-billed Duck—*Anas poecilorhyncha poecilorhyncha* (Peters)

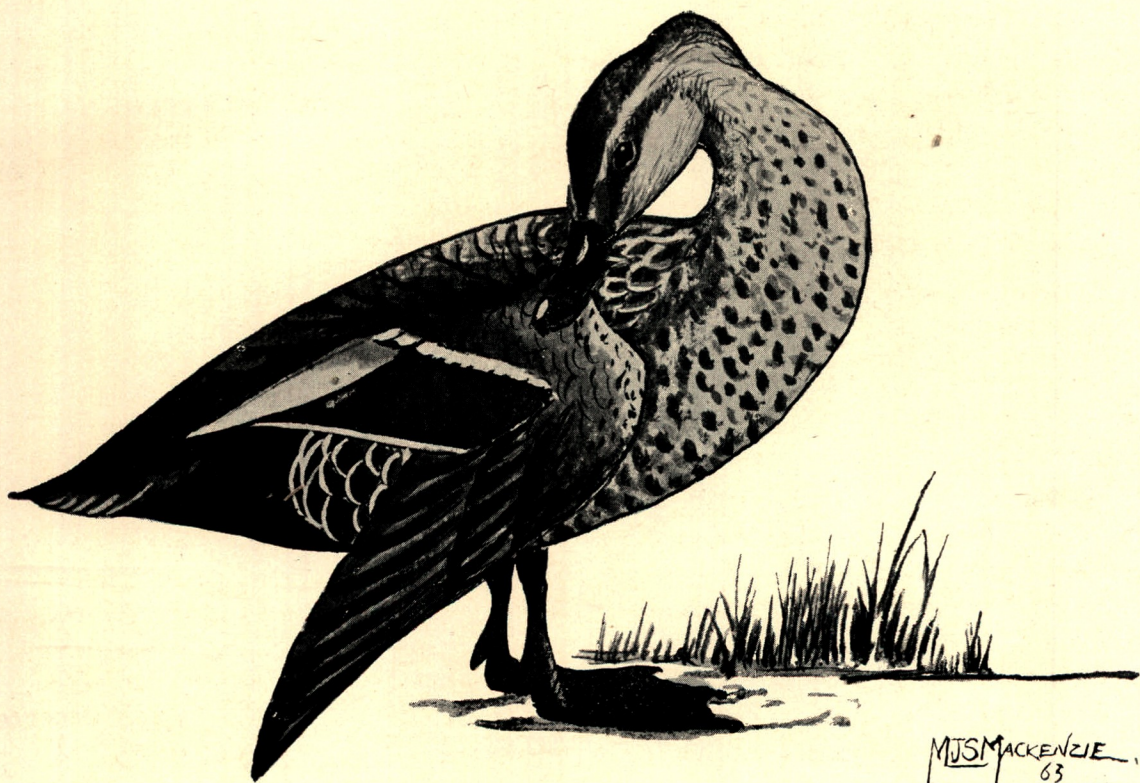
Sketch No. 2—Chinese Spot-billed Duck—*Anas poecilorhyncha zonorhyncha* (Peters)

Sketch No. 3—Burmese Spot-billed Duck—*Anas poecilorhyncha haringtoni* (Phillips)

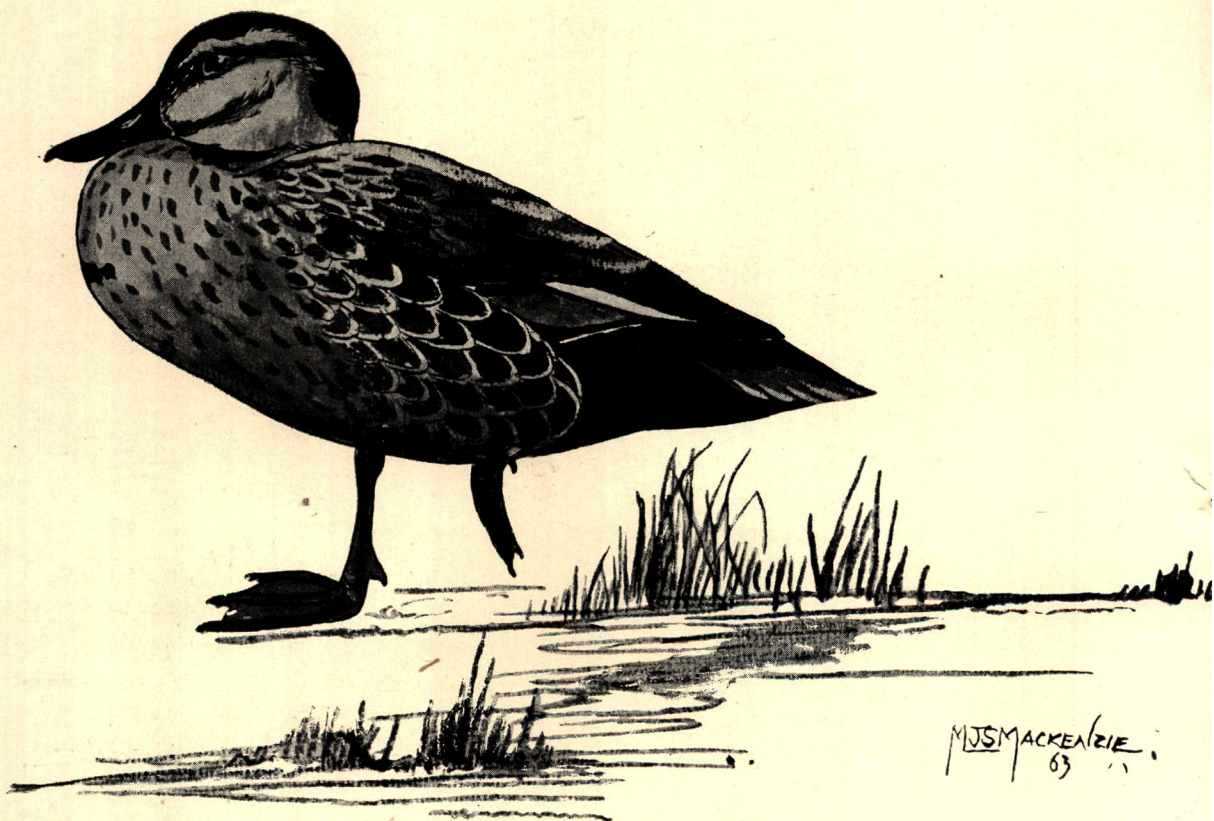
In this article I intend to give a brief description and comparison of flight, habits and markings so that all who are interested may quickly identify each type either on the wing or in the hand.

Spotbill are a group of large Mallards, or dabbling duck which live exclusively in Asia. The sexes are generally similar but the female is usually slightly smaller and duller in plumage. The name 'Spotbill' is derived from the bright yellow tip to the bill. There are roughly thirtyfive strictly different types of wildfowl to be found in India during the winter season most of which migrate North out of India during the hotter part of the year, but there are a few exceptions which either migrate within India or hardly at all. The Indian Spotbill is one of the latter, living its life in and about the same district throughout the year and only moving when food or weather conditions make it necessary. They spend most of the winter by the rivers, lakes and bheels but during the monsoon are often forced inland, away from the flooding rivers, to nest and feed. They collect in small groups during the winter but break up into twos and threes in the spring, thus you may find odd pairs courting in the wind over the rivers during the mating period or feeding and nesting in khet lands or by small water holes later on.

To pick any of the three species out in flight is not very difficult once you know what to look for. The yellow tip to the bill and exceptionally long neck characterise the Indian and Burmese birds and should the sun be shining onto them the head markings and bright orange legs make identification much easier. When in flight, red beak markings are only noticeable on the Indian Spotbill. The Chinese Spotbill is, of course, the rarest of the three species in



INDIAN SPOTBILLED DUCK



M. J. S. MACKENZIE
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CHINESE SPOTBILLED DUCK

India and, although it would not be mistaken for the other two, it may well be mistaken for a Mallard when in flight. Its build is more like a Mallard and its body generally browner than the other two species. Nevertheless, the broad wings, orange legs and yellow tip to the beak, common to all Spotbills, are usually quite noticeable.

Sketch No. 1—Identification at very close quarters or in the hand is naturally much easier. The Indian Spotbill has a dark brown crown as well as a broad line through the eye, the rest of the head and neck is a pale creamy white with grey specks lightly streaked on the sides of the head. The chest is a white cream with dark brown spots almost in lines running down to the underside and getting larger as they near the tail. The upper back mainly brown black, the feathers showing a very thin light line on their outer edge. Vent, tail, rump and lower back are black shot with very dark blue green. The wings are rather broader than those of a Mallard, primaries dark brown, secondaries forming a green mirror with purple reflections between black and white lines with the upper white line broader than the lower. The two innermost tertiaries (the large feathers at the wing base) are long and broad, pure white on the outer web. In the female this distinct white marking is usually blurred by brown at the top. There are two swollen red spots at the base of the bill, often joined slightly in the drake. In my experience the dimensions of these red spots are no indication of the sex as is commonly believed.

Sketch No. 2—The Chinese Spotbill has a more singular appearance. It does not have the two red spots at the base of the bill, it has a shorter neck, is a darker overall colouring, is less distinctly marked and less spotted. The crown of the head is black brown and a dark line runs through the eye. From the base of the bill to the ear coverts there is a dark, speckled line. This line makes identification easy and can sometimes be seen when the bird is on the wing. The eyebrows, chin cheeks and throat are buff, the abdomen is blackish brown rather than white black brown spots. The wing mirror is blue purple and not green, the white borders are nearly absent, the top one being so indistinct that it is often noticeable. The two innermost tertiaries are white on the lower outer edges only, the rest is brown.

Sketch No. 3—The Burmese Spotbill is smaller and not quite so distinctly marked which produces a duller but similar appearance. The red spots at the base of the bill are usually much smaller, a paler red and often not present at all. This bird probably migrates to Northern Burma as it is only seen here, in Assam, during the winter.

From the sportman's viewpoint the Spotbill is to be regarded as a good sporting bird. Though rather slower in flight than some they can be very fast, especially when frightened. Their habit of keeping low to the kugri sometimes makes for very difficult shooting but at

times they can be remarkably stupid. As a table bird they have few rivals even among the migratory duck and, like the Mallard, are excellent, roasted, casseroled or barbiqued.

In captivity I have found them both elegant and charming, easily looked after and fed and very quickly tamed. The most simple food is dhan shaken into water with a small quantity of boiled mashed vegetables. If you have a suitable pond only a little extra feeding is necessary to supplement what the birds will collect for themselves. A light over the water brings insects at night which all duck enjoy.

Compared with many other duck the Spotbills may not be the most glamorously coloured but they have a certain grace and beauty about them which makes them a most decorative bird to have in a wildfowl collection. They also breed reasonably easily and cross with Mallard quite readily, being of course of the same group. This makes Spotbill not only a good looking bird but also a useful farm yard addition.

M. S. J. Mackenzie,
Limbuguri T.E.
Tinsukia P.O., Upper Assam.

Human Baby Tempts Brown Bear

By S.P. Sahi

The cold horror of winter held full sway over the high mountains; a heavy snowfall had occurred a few days earlier as a result of which drinking holes and pasture grounds were buried deep under snow and many a wild animal and bird had migrated down into the lower hills. In the medley of the onrush some of the denizens had even strayed into cultivated fields and in proximity of human habitations.

The female brown bear was one of the migrants. But she was by no means a stranger to the new locality; year after year during severe blizzards, she had come down to the lower slopes for short sojourns. Discreetly, had she shunned the neighbourhood of fields and huts and had chosen for her temporary abode a dark niche in the steep mountain beneath the roof of jutting shales. And here in it, she had looked forward to stay in peace until the snow melted and the mountain air grew heavier with the odours of bursting catkins and wild flowers.

The morning was ablaze with a cloak of golden sunshine playing garishly upon the undulating desert of snow. Even the murky green of sporadic pine, oak and fir trees were dappled with the shimmering burden of pearly flakes. It was a fine morning as one could wish for. In the deep void between two mountains, a pair of golden eagles glided effortlessly beneath an azure firmament. And far down into the depth of the valley, diffused curls of grey smoke rose torpidly over the mosaics of verdant, mauve and yellow fields.

The she bear witnessed all the grandeur of the morning panorama. It was an ideal day for a prawl and for food and warmth. So she rose with a jerk and shook her shaggy frame. For a while she stood still prying into her environments with watchful eyes. Her belly rose and fell like an enormous bellow.

Down in the distance, dwarfed figures of two village women had just then emerged from across the lowly ridge. Slowly the women clambered upto the adjoining spur where pale grass stood in abundance. There the women began to wield their sickles and pile up the cut grass in long sheaves. The bear flicked her ears for a quick appraisal. Despite the distance, she could almost hear the faint *swish-swish* of the shearing blades. It made her a wee disconcerted; to her, the nearness of bipeds was always a precursor to mortal danger.

For a feed the bear must move down to places not touched by snow. So, to keep her distance from the women, she chose a line of advance along the upper skirt of the mountain and set off on all fours in a slow canter. But scarcely had she moved a few paces forward when a gust of cold wind blew past her and in its wake a horrid noise assailed her ears. The insidious notes emanated in waves and spurts. What could that be she wondered! Her wild curiosity inflamed, it got the better of her. Presently she deflected from her course.

Down and further down she padded quickly towards the seat of the din. Now she reached almost the brink of the vast stretch of golden hay. Here the bear took a rapid stock. By now the two women had moved far apart, cutting grass from untapped venues. And lo! not far from where she stood, lay a human child screeching and convulsing.

Suddenly the bear felt smitten with deep trepidity. It was a wrong strategy to meddle with human affairs; she had better betake herself to her own business ere the women took notice of her unwelcome presence.

Instantly, the bear moved off and began to regain the lost heights. But a strange phenomenon had taken the possession of her mind. She felt irresistibly drawn towards the human child. The reason was not far to seek. Alas! she had been a mother a little while ago and through an inclement fate had lost her little cub just before the snows came. Oh, how she had missed her little darling! Her breasts were turgid with surging milk.

Overwhelmed thus, the bear stopped short. A chain of strange thoughts began to travel through her mind. Presently a wild fantasy duped her of coherent realities; in the world of her imagination her cub was there, buoyant and live as ever, now frolicking ... now suckling her breast ... Oh ! the few barren days of life were over for once !

The day dreaming could elude her but not for long. The solace was ephemeral and anon the grim reality dawned upon her with excruciating pangs of barrenness. And.....andout of dire dismay was born a firm resolution. Involuntarily, she wheeled round and began tumbling down the heights once more.

The child had meanwhile ceased snivelling. The two women were still cutting grass. A soft breeze from the mountain side brought the scent of dry grass to her nostrils. Then all too sudden, the bear recognised her chance and quick.....quick.....she lifted the baby and made off with it.

The jolts frightened the baby and in the grip of the fleeing monster it screamed the more volubly. Startled by the commotion the women suddenly woke up from their preoccupation. Like a mammoth biped, the bear was scampering with the child in her massive hold. The helpless women yelled out hoarsely and began running pell-mell up the difficult trail left by the bear. But the nimble footed beast was more than a match for them. Like a woolly wispy cloud she soon disappeared far beyond the high rocks. In vain did the women wail and moan the loss of the child !

The village rose like one man at the alarming report and soon men deployed themselves in all directions. Every nook and corner, as far as people could make, was combed. For two days the unflagging tempo of the search continued but it all ended in vain.

On the third day many more men from neighbouring villages arrived to help the search campaign. Indeed the odds were very heavy; any hope of recovery of the lost child grew lesser with the passage of time.

Yet through a lucky chance, one of the parties climbed through the snows upto the bald knob of the high mountain and thence descended down into a dense oak forest. Here the breeze was icy cold and the thick canopy of the forest was impervious to sunlight. Granular ice lay strewn in blotches on the forest floor. Indeed, it was a most unlikely spot for the bear to take refuge in.

The day was fast drawing to a close with the sun looming low on the western sky. So the coterie of villagers, after a hurried *tet-e-tet* decided to retreat. And as the men began to retrace their steps they suddenly heard the faint whimper of a child arising from some

invisible spot down the hill. Instantly, *crunch.....crunch* the men trudged down, as fast as they could, through a marsh of snow, sleet and black mud.

The child had now ceased crying. But the men had already made a close surmise of the likely locality. Quickly they closed in on their objective and came down upon a luxuriant bower made of tall bushes laced with a tangled mass of creepers.

The bower lay serenely quiet. Perhaps the she bear had been fast asleep with the child by her side, or maybe she was not in the bower just then. Or perhaps, scenting the advent of a band of men, the wily bear had already taken to her heels, carrying the human child along with her.

Sceptically, the men began to beat the bush. A score of massive clubs rattled and trundled. *Clat...clat...crash*, went ahead the attack. Suddenly something moved. A harsh rustling was followed by a hectic *cluck...cluck...*and instantly a pheasant fluttered heavily and flew down at a low trajectory revealing its flamboyant feathers.

The beat continued uneventfully. Grave misgivings assailed the people. Perhaps a wrong bush had been investigated.

A small stretch of the thicket had yet to be beaten. But was it worth all the trouble? Suddenly, one of the men felt incredulously as if he had seen something inside the bush...a grey snout and an enormous sloping forehead. *Bhaloo...bhaloo...*he proclaimed blatantly. That acted as a signal for the bear to strike. Swiftly, the giant figure rose up and crashed out of the bush, the human child held firmly to her bosom.

The men had meanwhile taken their murderous strategy. But the child in the bear's arm confronted them with a refractory problem. The lone bear by itself would have been easier to deal with, but...but...

The bear suddenly darted out in an attempt to break through the human cordon. There was no time to be lost. A thunderous rain of stick blows instantly showered upon her. Beneath the clatter of blows, in vain did the beast bare her jaws and draw her telons. As she reeled helplessly, her grip relaxed and the child slid down. But deftly the bear turned to retrieve it by the other arm. A gruelling struggle ensued and the child would have been severely dismembered had it not been for a crashing volley of blows which quickly disabled the beast's other arm also. Dazed and disillusioned, the bear staggered and limped off to safety—a miserable bundle of aching bones.

The battle had ended and the whimpering child was safely in human hands. Anxious eyes now gazed upon the infant. But for a few fresh bruises, the child was in a robust

state of health and its vociferous wails amply evinced the unimpaired massiveness of its vocal chords. Thanks, indeed, to the brute; the child had been faithfully mothered.

At long last, triumphantly the men climbed up the mountain top and wended their way down the slope for the village. The fast descending twilight had already cast a pall of haze over the valley. The village cattle path fell steeply to the low lying fields. A chain of cattle was retreating lazily amid the tinkling of their throat bells.

Inspite of the daylong fatigue, the excitement of a job well done had suffused fresh blood into the veins of the men and their hearts pulsated with the rhythm of victorious anticipations. Oh, what an ovation they might receive in the village !

Just then, the evening quiet was suddenly raped by the cacophony of an inhuman moan... *Wooo... hoooo... ooooo*. Nervously the men huddled together and turned back in a deep hush-hush. There on the bald knob of the mountain, standing erect on her hind legs against a deep orange skyline was the sylhoutte of the bear, bellowing again and again the melancholy... *Wooo... hooo... ooooo*.

Ah ! was it not the voice of the jungle, a sylvan lullaby to lure some distant baby to sleep !

Who's Who In Wild Life Preservation

By HARI DANG

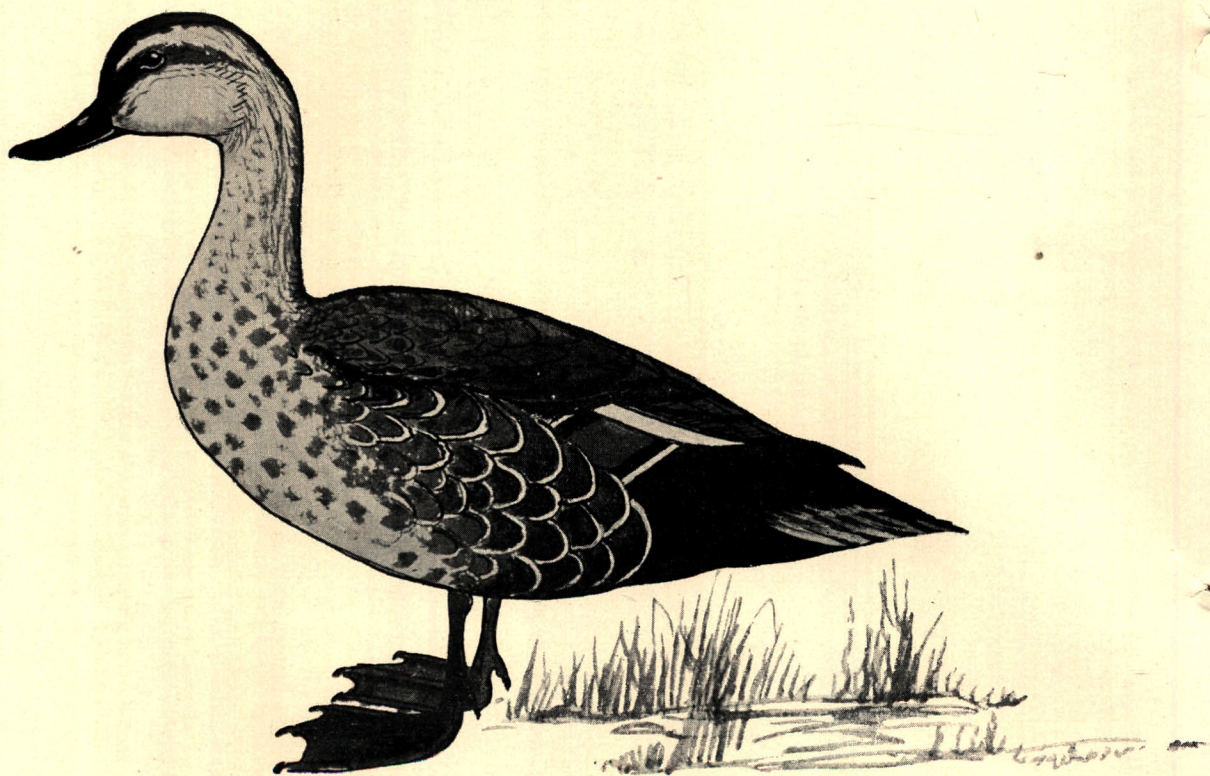
R.L. HOLDSWORTH

Ecce Homo: Behold the Man. No Christ with a thorny crown, but a sincere champion of legitimate shikar with a rich repertoire of tiger-tales.

How does one go about dissecting his versatile involvements with life ? I see him expounding John Stuart Mill's philosophy of political Liberty as a scholar at Magdalen College, Oxford, or boxing his way with straight-lefts, driving with straight bats on the cricket field, passing in subordination to teak-work at Soccer, and gaining excellence and 'Blues' at all activities simultaneously. I see him, through stories heard and experiences shared, disdaining ski-lifts and doing the Parsen-Kublis runs with professionals at Davos-Platz, or relishing his pipe on the summit of Kamet in 1931, before plunging down on ski to Meade's Col in the highest, run in history, with the nonchalance of genuine absorption.



Mr. R. L. HOLDSWORTH



MJS MACKENZIE.
63

BURMESE SPOTBILLED DUCK

(For reference, please see Page No. 38)

Ski-mountaineering his way out of the Everest expeditions of the Thirties by advocating this heretical form of climbing at meetings of the venerable orthodoxy of the Alpine Club at London; teaching this fascinating mode of mountain-travel to young Harrovians; stalking ibex and snow-leopard and markhor while Principal of Islamia College, Peshawar; crossing the Bhyundar Kanta on the Kamet trip and discovering the wealth of the Valley of Flowers; pipe-smoking his way down the Gulmarg 'slalom' runs, trailing long caravans of mules on fishing trips in unknown Kashmir valleys, or crossing strange, little-explored watersheds and passes in the Himalayas he loved, Holdie remains an enigma. The real man escapes these clinical pins of instances from a life that was so much a whole that it defies analysis.

Ecce Homo? Well, perhaps not. Let us be content with Holdie's part in the conservation and legitimate hunting of wild life; I include hunting purposely, because, as the recent spate of problem animals like the Rogue Elephants of Uttar Pradesh and Orissa, has shown, these are two facets of the same coin: hunting goes with preservation.

After twenty three years in the forests of the Doon, Holdie came to know more than most about the ways of their wild animals and birds. It was not that he shot an impressive number of tigers, or collected large numbers or assortments of lifeless scalps and heads, but that he roamed the forests with his eyes open to every forest nuance of beauty and movement, that he followed the copy-book of legitimacy, and underwent the full-blooded experience of an amateur shikari, whether with tiger or with ibex.

Given these basic urges, to roam the forests, mountains and rivers, as taught by the best in western thought, as in Vedic hymnal, it was not surprising that the Inauguration of The Society at Dehra Dun in 1958 found Holdie in the forefront, with his enthusiasm and knowledge. He undertook the responsibility of editing and publishing The Cheetal, and from the first laid sound principles by ensuring accuracy and reliability within practicable limits. He corresponded widely, and kept himself informed of the goings-on in the little-known field of wild life preservation. The earlier issues of the Cheetal, despite their occasional gauchery, bear the impress of his versatile personality and serve as guiding-posts to the successors.

Though it is about Holdie's views on wild life that I have undertaken to write, I find myself wandering compulsively to his enthusiasm for sport. Such, indeed, was the vision he brought to wild life, and his greatest contribution must remain, not a half-baked scientism popular these days, but a knowledgeable enthusiasm about legitimacy in sport.

Holdie suffered from slipped-disc trouble for years, but despite the doctors' prognostications that he would never shoot again, went out and shot bear the very next summer after the ailment's first appearance. More recently, he was diagnosed as having what is rather

mysteriously known as escemic heart trouble, and was told to follow a strict regimen, which excluded fishing or tramping after jungle fowl beats. Given the limit of half-a-mile, with characteristic ardour he declared he could not see himself cutting the line after a big Mahseer on the Ganges had made him fight it all the way down for half-a-mile.

The obverse of this resolute love of the chase and sport, was his equally determined and characteristically down-to-earth work for the preservation of wild life. With quiet sense he could in his articles and editorials puncture the scientific or plain incompetent balloon of those who made or advocated silly policies, and of both these species of enemy of wild life we have more than our share in this country. Having stepped into but not filled his shoes in the offices of The Cheetal, I can now understand how regularly and hard he must have worked to produce the Journal in time and keep it accurate and stimulating.

Fortunately for us, his spirit is still near us, though his body digs away at his beloved alpine garden in Britain. We can only hope that he will be with us long yet, and that fortune will bring him back to us, for however short a visit, one day, so we can once again try those well-beloved beats of Saharanpur, or try conclusions with the wily tigers of Kalagarh; may there be time yet to 'tire the sun' with heated and yet illumined controversy over the subject so dear to us all: the wilderness and its wild things.

Preliminaries on Relative Toxicity of certain Indigenous Plants on Fresh Water Fishes in the Doon

By

M.B. LAL AND VIRENDRA VARMA

Department of Zoology, D.A.V. College, Dehra Dun

A great problem before the Fisheries management is how to remove undesirable fishes? A number of Scientists and Ichthyologists worked on this problem. The ichthyologists of the U.S.A. reached some conclusions and found a few good toxicants which are helpful.

Greenbank (1941) and Brown and Ball (1943) reported the use of derris root. Greenbank used the powder of derris root in two lakes in Michigan at a concentration of 0.44 and 0.62 p.p.m. and found an apparently complete kill, but the temperature remained an unsolved factor.

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Brown and Ball also used derris root in the same lakes at the maximum temperature of 48.0°F, the toxic effect was restricted to the upper level of water, i.e., 10 feet. With another experiment too it is confirmed that derris root which yields rotenone is a good toxicant applied to fishes.

The same problem is before the Indian Government. They have put forward certain schemes which may help this problem by inventing certain good toxicants. These toxicants can be derived from Indigenous plants, found in abundance in all parts of India specially in the Doon Valley.

The present work was undertaken in connection with a Research Scheme sanctioned by the Directorate of Animal Husbandry and Fisheries, Uttar Pradesh Government. Preliminary work on this subject was conducted in other countries but the same work is undertaken here with the survey of plants and Test Fishes available in this valley.

The toxicity is the effect of certain foreign substances which are capable of disturbing the equilibrium of brain, or working of heart and its blood vessels, or it may effect the respiratory organs in the case of aquatic animals or may suffocate the terrestrial animals too.

These toxicants are the different types of poisons or the substances which produce toxic effect on a certain animal but may not be effective on others. It depends on the physiological nature of the organism. The toxic effect also depends on the relative strength of the toxicant which is capable of destroying the equilibrium. A lethal dose for an individual can be set. The high doses of these substances are even fatal to other organisms.

Our attention is confined only to the group of *Pisces*. The fishes are aquatic, cold-blooded animals, which breathe by means of gills. The body is dorso-ventrally flattened. They move by the contraction and expansion of the muscles, and keep the body in the horizontal plane with the help of fins.

A number of Ichthyologists concentrated their attention to this problem. Leonard (1939), Smith (1940), Greenbank (1941) and Brown and Ball (1943) worked over this problem. Later Smith (1950) again showed the effect of toxicity in semi-controlled laboratory on *Fundulus diaphanus* with "Fish tox". Clemeus and Martin (1953) worked on rotenone, a substance derived from the derris root. This work was of great importance to the state of New York. Rotenone was extracted from the derris root through different mechanical and chemical devices.

The rotenone is one of the most important substances used as fish poison in the foreign countries but this method is not of great value to us because derris root is not of

common occurrence in India. With this view we have to search certain plants for this purpose keeping in view the effect and the occurrence of the plant.

The district of Dehra Dun has been surveyed for the selection of Indigenous plants which may give us the desired toxicants. It has also been kept in view that plants should be wild and available in abundance throughout the year. The plant should also occur in other parts of India, otherwise the use of these plants or their products will be restricted.

The following are the plants selected after a thorough survey of the district.

Accasia pennata:—vernacular name (Alay, Agla).

This plant is very common in Dehra Dun district, Oudh, Kumaon hills, and in West peninsula. The pulp, bark and stem is effective as a toxicant to fresh water fishes as reported by Raizada (1937) and by Chopra on "Indigenous Drugs of India". The substance found is *Gyanogenotic*. The plants belong to the family *Leguminosae*. It is a small tree which possesses small thorns on its bark.

Sapindus trifoliatus and *S. mukorossi*:—vernacular name (Retha).

The two species are very common in India. *S. mukorossi* is found at Dehra Dun in great abundance, while the other is reported from South India. The fruits, roots and bark are analysed chemically and it is found that the pericarp contains about 10.5% saponin. It is also reported that the roots and bark too possess saponin.

Xanthoxylum alatum: vernacular name (Timru, Tejbel).

This plant is available in abundance beyond Rajpur in Distt. Dehra Dun. It is also reported from outer Himalayas, Khasia mountains, Lower Kagar valley, Jammu, Kangra and Palampur, etc. The bark of the stem produces fish poison (Toxicant). This plant belongs to the family *Rutaceae*. A prickly shrub with dense foliage having pungent acromatic odour and taste. The bark is largely used for toxication of fishes. Alkaloid have been found in barks as reported in the "Indian Forestra".

Roots, leaves and fruits are also thought to be toxic to fishes which is to be investigated and to be confirmed.

Tinospora cardifolia: vernacular name (Gilo).

It is a cultivated plant which is found all over India. This is a shrub and is also reported to be toxic to fishes. This belongs to the family *Menispermaceae*. This is a climber and contains a very small quantity of an *Alkaloid Berbarine* as reported by Verma in the Indian Forestra Vol. 63 1937.

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Arnychia pedunculata (Linn Wild) Mig (Syn *A. paucifolia* blume)

It is a small tree and is found in Dehra Dun, Konkan, North Kanara in the hill forest of Madras State, at a range of about 6000 feet in South Deccan, North Circars, Sikkim up to an altitude of 3000 feet to 4000 feet. In Khasia hills up to 4000 feet in Assam and Chittagong.

Albizzia chinensis:—Merr Syn *A. stipulata* boivin.

It is a long tree found all over India ascending to an altitude of 4000 feet in the Himalaya. This contains a small quantity of Saponin.

Casearia tomentosa (Roxb) or *C. gravelens* (Dabr)

It is a shrub or a small tree, which is common throughout India specially in open land ascending an altitude of about 3000 feet in the Himalayan hills.

According to Brandis, the fruits yield a milky acrid juice, which is employed to poison fishes.

Randia dumetorum:—vernacular name (Maidal, Mainphal).

This belongs to the family *Rubiaceae*, which is a small tree or a small shrub available in abundance in Dehra Dun District. The pulp of the unripe fruits is used for poisoning fishes.

Ongeinia dalbergioides:—vernacular name (Saidal Benth)

This belongs to the family *Leguminosae*. This is a very important and cultivated plant available in Distt. Dehra Dun. Its stem, bark and leaves are reported as toxic to caterpillar and also act as piscidal.

After having a thorough survey for the plants, we were required to find the fishes available in our district as *Test Fishes*. A survey of the rivers and tanks is made.

Dehra Dun is a valley and a good number of hill rivers surround its boundaries.

Dulhan River:—This is 19 Kms. from the city. It is 8 m. wide and 3 Kms. long. The depth varies between 30 Cms. to 90 Cms. This depth range also varies according to the seasonal variations. The river originates from Ballawala village and joins the Song river in Lachhiwala.

The following are the fishes available in this river:—

Barbus sarana, *Barbus chola*, *Barbus ticto*, (*Puntius*), *Tor tor*, *Tor putitora*, *Barilius bendelisis*, *Chagunius chagunio*, *Garra gotyla*, *Rasbora daniconius*, *Badis badis*, etc.

Suswa River:—It is 9 Kms. from the city near Clement Town area, 38, Kms. from the city near Kansro Railway Station. It originates from Banjarawala village and partly from the local

springs of the spot. This is a most dangerous river of the valley which possesses a depth of 30 Cms to 90 Cms. 14 m. wide and during the rainy season this may vary to 1.5 m. to 2.5 m. This is an important centre of fishes. The fishes available are as follows:—

Tor tor, *Tor putitora*, *Barilius bendelisis*, *Labeo dero*, *Ophicephalus gachua*, and many other fishes.

Maldevta Dam:—It is 13 Kms from the city on the way to Raipur. In the First Five Year plan the U.P. Govt. Fisheries Department decided to develop this dam for the Piscicultural purposes, but the Scheme did not materialize. The followings are the fishes of this area:—

Tor tor, *Tor putitora*, *Barilius bendelisis*, *Barbus sarana*, *Garra gotyla*, *Ophicephalus gachua*.

Song River:—This river is 18 Kms from the city near Raipur, 23 Kms from the city in Lachchiwala on the main line to Rishikesh, 27 Kms from the city in Doiwala region. This has a varied depth, breadth and length. It has a rocky bed. The following are the fishes found in this river:—

Barbus sarana, *Tor tor*, *Tor putitora*, *Barbus ticto*, *Barbus stigma*, *Barbus chola*, *Barilius bendelisis*, *Chagunius chagunio*, *Garra gotyla*.

We have selected genus *Barbus* as the *Test Fish* for our experimental work. Other fishes will also be included in the list.

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The Audubon Society

You probably know that its members spend a good deal of time watching birds and looking after their welfare. Its interests, though, extend far beyond the subject of birds. The National Audubon Society* is dedicated to the protection of all natural resources—wildlife, plants, soil and water.

A privately financed, nonprofit organization of 43,000 members, the Society spends more than \$1,000,000 a year to further public understanding of the need for conservation. Through various publications, lecture programmes, camps, sanctuaries, tours, etc., it annually reaches an estimated 2,000,000 persons. There's scarcely a community that doesn't have, or hasn't had, an Audubon Junior Club for children. Some 10,000,000 children have belonged to these clubs, usually organized in schools and youth groups, such as the Cub and Girl Scouts, and 4-H clubs.

Regular Society membership is open to everyone and costs \$6.50 a year. You can join, through one of the 50 local branches or through national headquarters (at Audubon House, 1130 Fifth avenue, New York 28, New York). Membership privileges include a subscription to the Society's official publication (*Audubon Magazine*), regularly scheduled field trips with branches or affiliation groups, the opportunity to take Audubon-led tours of wildlife sanctuaries, and use of all Society facilities for either group or individual nature-study programmes. For instance, staff experts answer such questions as how to attract birds to a home or garden.

The Society has been linked closely with birds because of its early efforts to stop the slaughter of egrets, herons, terns, and other beautifully feathered birds. At the turn of the century, hunters were indiscriminately killing these birds for plumage for women's hats, as well as other birds in great numbers for food. Due in considerable part to the Society's work, state and federal laws that helped curb the bird slaughter were enacted. Society projects include:

Wildlife sanctuaries

Society wardens patrol about 1,000,000 acres of land and water (mostly in Texas, Florida, and Louisiana) that have been set aside mainly as sanctuaries for birds. In most great concentrations of birds nest, roost and feed. The Society owns much of the land, but

*Founded in 1904 as the successor to the National Committee of Audubon Societies, it's the oldest and one of the largest national-conservation organisations in the U.S. The Society was named for artist-naturalist John James Audubon.

it leases a substantial part from local-, state-, and federal-government agencies and private owners. Wardens are paid by the Society, but they usually have been deputized by both state and federal governments and have full powers to enforce sanctuary rules against killing or trapping.

Some species, among them egrets, ibises and spoonbills, once were almost wiped out, but they're now thriving because of these sanctuaries. The Society also operates several refuges for educational purposes. In effect, they are laboratories, where thousands of visitors annually study nature firsthand.

Training camp

At each of four camps, located in Maine, Connecticut, California and Wisconsin, there are five two-week sessions during the summer. Some 1,000 persons attended these intensive training programmes during 1958. The courses cost \$ 103, which includes room and board. Although they're attended mostly by teachers and youth leaders, the camps are open to anyone over 18 years of age who is interested in conservation and nature. Attendance at each two-week session usually is limited to about 50.

Screen tours

About 500,000 persons see color movies of American scenery and wildlife each year. Well-known naturalist-photographers are commentators. A staff of 30 lecturers visits more than 200 cities, each of which usually contracts for a series of five film-lectures. Tours are scheduled a year in advance, although it is occasionally possible for a community to book a lecture after the schedule has been announced. Full information on these tours is available from the Society's New York headquarters.

Wildlife tours

Society wardens, using station wagons and boats, take thousands of persons on expertly led tours of sanctuaries and wildlife areas in national parks and forests every year.

Wildlife research

A field-research programme seeks ways to save and restore species threatened with extinction and, at the same time, to protect them from hunters. Successful projects have included those on the whooping crane, California condor, and American flamingo. A current project involves an investigation into why the bald eagle has been declining in recent years.

Library and information services

Located at Audubon House, the library, containing about 15,000 publications, is one of the most complete of its kind in the world.

To Keep This Earth Habitable

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It is an ironic paradox that we should have begun to learn the necessity of preserving natural balances at the same time that we have achieved the means and the driving impulse to destroy them. Ecology, the study of all forms of life and their mutual dependence, has become a major science even while our technology has given us the most effective tools in all history with which to blight and despoil life's fundamental necessities. We now know what we should do for our present and future welfare, but we wilfully race toward irreparable change that violates that knowledge. This is an old conflict, this war between man's arrogance and his wisdom, but we have given it new and terrible dimensions. Reluctant to face its consequences, we call it a mere difference of opinion about conservation.

Conservation has a bland aspect as a word, but it now means the protection and preservation of our vital, natural environment. This includes the air we breathe, the water we drink, and the land we live on. A major part, but by no means the whole, of the objective of conservation today is the protection of our remaining natural areas and their native wild life: birds, animals, plants—the whole biotic community that would be there if man kept his hands off. This phase of conservation is based on the belief that our remaining remnants of wilderness and wild areas are a priceless economic asset as well as a vital resource in terms of human welfare. Life simply lacks an essential dimension if it is limited to a man-made world of machines and technology.

Theoretically and in the large, Americans believe in conservation, but when it comes to application of the theory, to actually preserving natural areas or even to checking pollution of air or water in specific areas, we find all manner of reasons to object. This contradiction of purposes is deeply rooted in our own traditions, as any student of history must know. Individually, we have an ingrained compulsion to save. Nationally, and even racially, we have a long history of exploitation and waste. Unless these factors are understood, the whole idea of conservation becomes little more than a perennial political dispute.

Riches Down the Drain

At the time of original settlement by European colonists, this country was an incredibly rich warehouse of natural resources—timber, grass, land, water, minerals and wild game—that seemed inexhaustible. The original colonies were founded to exploit this incredible

plenty for financial profit, and for generations the nation's purpose was to conquer and use the land and everything upon it. Parallel with this national impulse, however, was the pioneer's personal code, summed up in the maxim, "Waste not, want not." This precept had roots far back in human history and ranked just after the Ten Commandments in importance. Waste of his personal possessions was a reckless and even a sinful act for the pioneer whose gun, ammunition, axe, and plow were hard to come by and difficult to replace. They often meant the difference between death and survival.

So here was this man, this pioneer, carefully conserving his personal possessions, sent out to tame, possess, and exploit an area where natural resources were so plentiful they invited waste. If a farmer cropped his land to death or let it erode down to hard-pan, he could move with his precious axe, gun, and plow to new land only a few weeks of travel away. If a lumberman stripped a woodland, he could readily move his crew to another virgin forest. The sheepman whose flocks grazed the grass to its roots could move those flocks to new grass just over the horizon. Even the buffalo hunter could kill a vast herd down to the last bull, take the hides and tongues, leave the carcasses to rot, and find another herd a few hills away. Whoever he was, whatever was his occupation, he lived by a code that made waste a personal sin and exploitation a public policy.

But eventually changes set in that altered both the personal need to conserve and the public policy of waste, or at least of unlimited and extravagant use. The industrial revolution, which began in Europe in the middle of the eighteenth century and grew swiftly here throughout the nineteenth, began to wipe out the scarcity of material possessions. Power applied to the loom and the forge, a surge of mechanical invention, the swift growth of chemical processes, and the spread of easy and swift transportation ushered in an age of material plenty. But this vast revolution, coupled with a tremendous increase in human population, soon began to shrink the vast supply of natural resources. Under the twin pressures of use and waste, our excess of land, timber, grass and clean water were clearly not inexhaustible, as we had so long thought they were.

From an age of material scarcity we have been swept into an era of manufactured plenty. But in terms of natural resources, raw materials as well as such essentials for healthy life as clean air and water, we are again approaching the point of scarcity. The old positions have been reversed. As consumers, we live in an era of planned waste. Our factories are so productive and our economic web so complex that unless we accept built-in obsolescence, use briefly and discard, our factories will grind to a halt and our whole economy will be in crucial trouble. Conservation of consumer goods has become an economic sin. But nationally we have passed the point where waste of resources can be condoned.

Lag in Wisdom

This is not the place to argue the merits of such an economic philosophy or do more than suggest its inevitable contradictions. But it is in order to point out how confusing it makes the whole basic belief of conservation. With the habit of personal waste so strong, and with the demand that we use and discard so insistent, it is difficult to believe in the necessity of saving a virgin forest, an unpolluted lake or stream, a beautiful seashore, or even a commercially unproductive swamp. When the new maxim is "Live it up!" even the poisoning of the air we breathe and the water we drink rouses only sporadic concern. In this new age, when our technology promises new miracles every hour on the hour, we seem to think that the solutions for all such problems are right there in the test tube or the electronic computer. We forget the fundamental facts of life. We forget the past.

Man's technology seems always to have outraced his wisdom in the use of natural resources. As far back as we trace their history, civilizations have risen on one system or another of plundering their environment, and they have fallen when that plunder was complete. When man had cut the forests, sapped the land of its fertility, or polluted his water supply, his city-states faltered, and his civilization began to die. With a strange arrogance, even a pride in human accomplishment to the point of self-destruction, we tend to blame social decadence and the invasion of barbarian hordes; but in almost every instance, the fall can be traced to reckless waste and destruction of the natural inheritance of the environment. Man persists in his belief that he can master that environment and cancel the laws of nature, but history shows that he has never quite succeeded in complete mastery.

Any one factor of such waste can destroy man and his works in the end, so rigid are the conditions of nature. Lack of clean water can be fatal. Lack of fertile farm land can starve him to death. Lack of trees can pyramid his troubles and make his downfall inevitable. Once the trees are gone, a whole train of disastrous consequences follows: There are subtle changes in climate; the water supply dwindles; erosion eats at the land, and even the fuel supply becomes an acute problem. The stark mountains of Greece today are a grim reminder of irreparable damage done to a green and hospitable land 30-odd centuries ago when Bronze Age Achaeans came down from the north and stripped primitive Hellas to build an "enlightened" culture that, for all its enlightenment, inevitably perished, victim of man's insistent waste. The same story has been written on every continent, but man is slow to read and stubbornly reluctant to learn.

Margins for Safety

We are fortunate in having a land not yet completely exploited and in having among our scientists those who have learned the facts and stated the significance of man's relationship to

his environment. The ecologists remind us that man, the most destructive of all predatory creatures, is only one element in the whole community of life and that when he upsets the balances in that community, he endangers everything in it, including himself. Basing his philosophy on the ecologist's facts, the conservationist attempts to do something about the situation.

Fundamentally, the conservationist wants to preserve human life, health, and sanity. To do this, it seems essential to check technological man in his headlong race to reshape the world in the image of the machine age. The conservationist would save at least enough of the natural environment to serve as a gauge against which to measure man's irreversible changes and to appraise their consequences. He would like to preserve sanctuaries in that natural environment where harried man could renew his soul and spirit, perhaps his body and his mind. He would save for future generations such now rare things as a virgin woodland, a vanishing species of bird or animal, an unspoiled lake, or even the soothing solitude of a mountaintop inaccessible to the automobile. He also fights for clean air and clean water around cities, and for parks within them. But he gets most notice when he insists that we should save and protect the wilderness and our remaining remnants of unspoiled land.

Because settlement came relatively late to the West, most of the land that would be protected by the various conservation programs is situated there. As a native Westerner, I can understand the stubborn resistance of many Westerners to these programs. Stockmen, lumbermen, and miners say, with a degree of plausibility, that they would be deprived of the grass, timber, and minerals that they regard as theirs by inheritance. They point out that they came late to the national feast, that the East and Midwest raped their own forests, pillaged their farmlands, polluted their streams, made culmdeserts of their coal lands, decimated their wild game, made honky-tonks of their beaches and their mountains, and created personal fortunes doing it. Westerners claim the right to use the natural resources of their own area to create similar wealth. What they fail to admit and refuse to accept is the fact that both the times and the conditions have changed. They would match a great folly of the past with an even greater one of today, for the remnant of wilderness and unspoiled land in the West is now a national resource beyond price, something which, once exploited, can never be replaced. They should be its guardians, not its exploiters.

I happen to have lived for a number of years in a part of New England that, although now called "unspoiled," presents an eloquent case history of what happens to an area which, with the best of motives, was shaped by the determined, industrious hands of a succession of inhabitants who believed that man was put on earth to possess it and use everything upon it.

The first white settlers who came to this part of the lower Berkshires had to chop a pathway through virgin woods to get here with their carts and cattle. In this typical valley and on its surrounding hills, they found a climax forest—white pines two hundred feet tall, oaks seven feet in diameter, huge elms and maples and chestnuts. The land was laced with brooks, and the Housatonic was a clean, quiet, benevolent river. Resident Indians grew corn, beans, and pumpkins in natural clearings, hunted wild game in the woodland margins, caught all the fish they could eat in the streams.

When Trees Are Enemies

But trees were the silent enemy of the farmer, barring his plow and harboring wild beasts. The white settlers cleared fields, first in the valleys, then on the hillsides. My own mountain-side is mazed with tumbled stone walls that once bounded fields now long overgrown and inaccessible except on foot. Following the custom of the time, they burned most of the trees, using only what they needed for fuel and building material.

Then iron ore was discovered nearby, and smelting furnaces were built. The furnaces needed charcoal for fuel. Technology came to the area. The hillsides were stripped of their timber to feed the charcoal pits. The woodcutters left great tangles of slash, and careless fires swept through it, burning not only the waste but the woodland's underlay of duff and litter that for centuries had protected the soil and sponged the rain that fed the springs and brooks. Erosion soon stripped the hills to their fundamental rock. Springs failed. Brooks, swollen with every rain, gullied the tiring valley fields. The river, robbed of its natural reservoirs, became a temperamental, flood-prone stream. Hillside fields were abandoned and valley farms languished. Young farmers migrated to Ohio and Indiana and Illinois to clear and plow and plant new fields. Older ones were reduced to subsistence farming.

Eventually, new woodland began to cover the hills once more; but before a tree can grow, there must be soil. Soil accumulates with distressing deliberation, and it takes two human generations for a white pine to approach maturity. But about 75 years ago, there were trees big enough for sawlogs. Loggers moved in with their sawmills, and the harvest began again. Lumbering continued on a diminishing scale until about 40 years ago.

Today there is forest cover once more on most of the hills. It is third-rate woodland, but it is growth and greenery, and it eases the eye and somewhat protects the land. Thanks to erosion control and soil conservation, most of the valleys are again good farmland. But the whole area is indelibly marked by the heavy hand of man and his repeated exploitation. The river, poisoned by paper mills and polluted by the sewage of half a dozen defiant communities, is a public nuisance in Massachusetts although it somewhat purifies itself by the time it reaches my corner of Connecticut. And the air here is unpolluted by factory smoke;

the underground water is clean and plentiful; songbirds nest here; there is a remnant of the original wild animal population; wild flowers grow at the roadside, and no superhighway yet traverses this part of the valley. We call it unspoiled—and in our very acceptance of that term, which is relative and ignores the whole rapacious history of man here, is the sad story of what can and does happen, what comes to be accepted as inevitable.

Devastation in Ignorance

I have seen the same things happen, in one form or another, in places far younger than this in terms of man's possession, most of them in West, where the most vigorous opponents of public conservation would maintain individual rights of use and development. On the high plains, I have seen how profligate sheepmen overgrazed and destroyed grassland in a few years, grass that had endured for centuries before they came. I have seen greedy wheat farmers plow original sod on marginal land, reap a few rich harvests, and leave the raw topsoil open to erosion that will take years to heal. I have seen Colorado loggers strip a whole mountainside and lay it bare to the scarring of fire and wind and rain. And anyone who has driven from Denver to Idaho Springs and Central City must have seen the ghastly crime committed by ore-mad miners against the once beautiful stream still ironically called Clear Creek. It is such crimes against the land, committed in the pious name of use and development, that make conservationists so insistent on protecting parks and wilderness areas from exploitation.

Man seems by instinct to be a devastator, and as his technology advances, his capacity for devastation increases by a kind of geometrical progression. Give him an axe or a chain saw, and he must cut trees. Give him a bulldozer, and he must level a hill, fill a valley. Give him a cement mixer, and he must build a dam or lay a superhighway. Some of these things are essential and beneficial, but by no means all of them and everywhere. It is not necessary that man rebuild the whole earth according to his own plans, since those plans do not always coincide with the forces that made this earth to begin with and have not and never will be repealed. Man is not omnipotent, though he often acts as though he believes he were. This leads to an arrogance toward his environment that is insistently stupid and shortsighted, often immediately destructive of his own welfare. Examples of this abound, but I shall cite only a few.

Last fall, on an automobile trip west, I saw from forty miles east of Chicago a vast gray cloud that hung over the whole area like a foggy pall. It baffled me, since it was a brilliant, sunny day, until I entered the edge of that cloud still east of Gary, Indiana, and felt the bite in my nostrils. It was a cloud of smoke and fumes from the steel mills and other factories that rim the lakeshore for miles. It was the daily atmosphere breathed and lived

in by perhaps five million people. Yet efforts to preserve and protect a small area of lakeshore dune country, located just east of the edge of that perennial pall, as a natural area and an occasional refuge from the metropolitan noise and fumes has been fought tooth and nail by men who insist that such conservation would deprive them of their natural rights. Rights to do what? To build more steel mills in that dune country, though our present steel mills are working at only a fraction of their capacity. To extend the acrid pall over a still wider area.

A few years ago, in response to regional demands, the United States Department of Agriculture undertook to wipe out fire ants in the South. A plan was drawn up to spray with dieldrin and heptachlor, chlorinated hydrocarbons, insecticides even more powerful and poisonous than the notorious DDT. Congress appropriated \$7,000,000 for the program, although naturalists, conservationists, and scientists warned that the chemicals to be used were non-selective insecticides, dangerous to man and domestic animals as well as wild life in general, and would remain poisonous in the soil for years. Despite these warnings, six thousand square miles were aerial-sprayed. The spray killed nearly all the songbirds and game birds in the area, killed large numbers of mice, voles, shrews, and other natural insect eaters, killed most of the rabbits, squirrels, opossums, raccoons, and armadillos in the region, destroyed 80 per cent of the earthworms, killed fish and aquatic animals by the million, destroyed most of the beneficial insects—and did *not* eradicate the fire ants! The spray also killed swine and cattle, and nobody yet knows how many human beings were sickened and poisoned by it. Yet those sprays are still marketed, still advertised, still recommended, and still used extensively by the Department of Agriculture and other public and private agencies. Their manufacture and sale is a multimillion-dollar industry.

Despoiling the Ocean

The people of the Los Angeles area have miles of Pacific oceanfront and sea-shore in their front yard, but they empty into its waters so much sewage and industrial poisons that it is dangerous to swim in it and noisome to use the beaches. Angelenos drive an aggregate of 50 million miles each year to reach relatively clean surf and beaches for their recreation. The people of San Diego have in their dooryard one of the biggest bays in the world, yet they so pollute its water, despite the constant flushing action of waves and ocean currents, that every drop of it, literally, contains a bacterium that could cause sickness or death. Well over ten million people live in cities and towns on the banks of the Hudson river between Albany and New York City. That river, once a clean, benevolent stream, could supply many times the huge amount of water needed daily by those millions of people, but they dump so much sewage, industrial waste, and other poisons into it that they have to spend

tens of millions of dollars annually to bring potable water to their faucets from sources beyond the reach of their own filth. Most of the major cities of America have lakes or rivers in their dooryards, but all of them so pollute those sources that they must go elsewhere for the water they drink or must expensively filter, chlorinate, and partially purify water they have just contaminated. Not only are their own waters unfit to drink; in many instances they are unsafe to swim in. Yet every campaign to minimize pollution of public waters, a program that would save untold millions of dollars eventually as well as reclaiming streams, lakes, and beaches for safe recreation, is bitterly opposed not only by industry but even by municipalities. Why? Because those public waters have been expropriated for use as open sewers.

If such instances do not add up to arrogance and shortsighted stupidity, then I do not know the meaning of words.

A Habitable Earth

What can be done about it? We can face the facts. We can learn from history. We can study and draw our own appraisal of the findings of the ecologists. We can admit that man, potent and technologically powerful as he is, must eventually deal with natural forces and natural balances that he cannot cancel or repeal or reason away with his electronic calculators. We can see what is happening around us every day, weigh it against both the past and the foreseeable future, and be skeptical of the consequences of man's irreversible actions. If, as we have long believed, man inherited the earth at the beginning of his tenancy here, he inherited responsibilities as well as rights, and among those responsibilities is the obligation to keep it habitable not only for himself but for his co-inhabitants here, among whom, after all, he is vastly in the minority. That—to keep this earth habitable—is in essence what the conservationist is so insistent on doing.

Reviews

ELEPHANT GOLD

By P. D. STRACEY

(*Wetdenfeld & Nicolson 30s.*)

Of late there has been a spate of books on Shikar though books on elephants have not been common. When *Elephant Bill* was published a few years ago it endeared the Burmese elephant to many who care for that 'monstrous beauty' and one wished to have the story of his Indian brother.

Elephant Gold does not do that though it has quite a few interesting things to tell about the elephants of Assam. Having spent thirty years with elephants Mr. Stracey writes with authority but though he raises so many hopes in his readers he does not always fulfil them. There is so much that one would like to know about the position of the elephant today, about its prospects in the fast-changing economy of India (and Assam) and above all, about hopes of survival in this age of mechanization.

Lovers of Jumbo, nevertheless, have to thank the author for his interesting book and for the superb photographs it contains.

SHIKAR

From the pen of a controversial figure, comes yet another book on Shikar. (Robert Hale, Shikar, by Khan Sahib Jamshed Butt.)

The blurb tells us that the aborigines of the Madhya Pradesh know Mr. Butt as the Wizard of Hunting, and just to make sure that no one doubts the blurb, there are appended no less than four letters of recommendation from some of his 'clients', for Mr. Butt is a Professional Shikari. We know of some of these 'clients', and while some are sportsmen, others are not.

In the usual progression from forest childhood to passionate addiction, Mr. Butt leaves out nothing; if only he had added something to what we have read a hundred times! James Best wrote it all in the last century!

Some of his comments and methods as he used them are not without an interest; Mr. Butt is at his best when he is being sincerely poetic; then something of the Mahua filled forest air of the M. P. seeps through this somewhat dull account.

—By Banavenfuse

Correspondence

The Editor,
The Cheetal.

Sir,

With reference to Mr. E. P. Gee's article "Wild Life is threatened", In Vol. 5 No. 2 of Cheetal, I wish to draw your attention to the mention, in the 3rd para on page 19, of the Rusty-spotted cat as being one of the animals now extinct.

For the last few years, I have been collecting specimens for the Natural History Museum of the St. Xavier's High School, Bombay and I had sent 2 skins of cats—one about 3 years back and one this year—which were both identified as being of the Rusty-spotted cat by the Bombay Natural History Society.

In fact one of these skins has been retained by them while the other is mounted in the St. Xavier's High School Museum. These cats were collected from the adjacent areas of Bansda and the Dangs forest. They seem to be fairly common in these areas as I have seen them on a number of occasions during my trips through these forests. Incidentally the collection of these specimens from the Dangs area constitutes a record as the northern most limit of the range of these cats—the limit hitherto recorded being more south to this area.

I shall feel most grateful if you could kindly pass on this information to Mr. Gee and get me his valued comments to clear the doubts that have cropped up in my mind on reading his article. I would have written to him directly but I do not have his address and hence am troubling you.

Yours etc.

Maharaja of Bansda.

What would the world be if once bereft
Of wet and of wildness? Let them be left,
O let them be left, wildness and wet;
Long live the weeds and the wilderness yet.

—Long Manley Hopkins.

भारत में वन्य जीव गणना

[रूपनारायण मिश्र]

भारत को प्रकृति ने वन्य जीवों—पशु पक्षियों से ऐसा सुशोभित किया है कि समस्त संसार के निवासी देखते ही रह जाते हैं। जो पर्यटक यहाँ आते हैं उनमें से अनेक वन्य जीवों को देखे, फोटो लिये तथा शिकार किये बिना नहीं लौटते और इस कारण भी यहाँ पर्यटकों का तांता बंधा रहता है। अनेक पर्यटक अफ्रिका भी जाते हैं पर जिन्होंने अफ्रिका और भारत दोनों के वन्य जीवों को देखा है वह भारत को अफ्रिका से इस विषय में किसी प्रकार कम नहीं पाते। पर खेद है कि संसार के देशों में भारत के इस आकर्षण का उचित प्रचार नहीं होता है।

अनन्त काल से वन्य जीव धन भारत निवासियों की निधि रही हैं और यहाँ के साहित्य, संस्कृति तथा धर्म में वन्य जीवों को उचित स्थान मिला है, शिकार सदा ही होता रहा है पर जैसे जन संख्या बढ़ती गई वन तथा वन्यजीव कम होते गये। वन तथा वन्य जीवों की रक्षा का प्रबन्ध प्राचीन भारत में भी होता था जैसा कि अशोक के शिला लेखों, कौटिल्य के अर्थशास्त्र से विदित है। यहाँ के राजा महाराजाओं का ध्यान इस तरफ विशेष रूप से रहा है और वन्य जीव अधिक संख्या में कम न होने पाये। वन्य जीव यहाँ के आदिवासियों के जीवन का अभिन्न अंग रहे हैं उनका मनोरंजन तथा खाद्य-सामग्री। ऐसी अवस्था में वन्य जीवों की रक्षा परम आवश्यक है। उनकी संख्या जब से गोली बारूद का युग आया है कम होती गई है और अनेक प्रकार के वन्य जीव लोप हो गये हैं।

अंग्रेज शासकों ने वन विभाग स्थापित किया उद्देश्य था राज्य की आय बढ़ाना तथा वनों की रक्षा करना पर इसका फल यह हुआ कि भारत जैसे वन प्रधान देश में आज लकड़ी बाहर से मंगाने की आवश्यकता है—लकड़ी की जगह गोबर जलाया जाता है जिससे अन्न की उपज में कमी होती है। खेद का विषय है कि स्वतन्त्र भारत में भी यह क्रम जारी है और जितनी लकड़ी काटी जाती है उससे कम पैदा होती है। वनों का क्षेत्र कम होता जा रहा है और वन्य जीवों को रहने का स्थान भी। वनों की रक्षा के साथ अंग्रेज शासकों ने वन्य जीवों की रक्षा के लिये कानून बनाये पर वन्य जीवों के शिकार को विशेष रूप से सरकारी अफसरों तथा अमीर जमींदारों, राजा महाराजाओं के मनोरंजन का साधन ही समझा गया। सरकारी वनों के बाहर रहने वाले वन्य जीवों की रक्षा पर कोई विशेष ध्यान नहीं दिया गया—कानून बनाये गये पर उनके पालन करने पर ध्यान नहीं रहा। बिजली की टार्च तथा जीप मोटर ने वन्य जीवों की रक्षा करने वाली रात्रि को भी दिन बना दिया और एक रात्रि में सैकड़ों मील के क्षेत्र में शिकार करने की प्रथा चला दी जिससे वन्य जीवों की संख्या में भारी कमी आ गई। इस कारण वन्य जीव गणना होना परम आवश्यक हो गया है। भारत सरकार का वन्य जीव सर्वेक्षण विभाग इस दिशा में बहुत ही कम काम कर सका है। वन्य जीवों की वैज्ञानिक गणना होनी चाहिये। अभी तो सरकारी जंगलों में इस दिशा में कोई कदम नहीं उठाया गया और वन्य जीवों के शिकार के आज्ञा पत्र बिना यह जाने कि वन्य जीव है या नहीं दे दिये जाते हैं। यह स्थिति अत्यन्त असंतोषजनक है।

भारत तथा संसार के विभिन्न देशों में वन्य जीव गणना की अनेक रीतियाँ हैं पर प्रत्येक देश, क्षेत्र तथा विभिन्न जीवों की गणना में विशेष समस्याएँ सामने आती हैं भारत के लिये उपयुक्त कुछ गणना रीतियों का वर्णन दिया जाता है यह सभी रीतियाँ भारत में काम में लाई जा सकती हैं।

(१) पद चिन्ह गणना रीति (Track count) इस रीति में पद चिन्हों से वन्य जीवों की गणना की जाती है। वन्य जीव पानी पीने, खेत चरने इत्यादि के लिये विशेष स्थानों पर विशेष मार्गों से जाते हैं और पद चिन्हों से अनुमान लगाया जाता है कि कितने वन्य जीव किसी क्षेत्र विशेष में हैं। यह रीति जब पानी की बहुत कमी होती है और जब वन्य जीव एक ही पानी पर जाते हैं प्रयोग में लाई जाती है इसको भारत में गिरि क्षेत्र में रहने वाले भारतीय बबर शेरों की गणना प्रयोग में लाया गया है।

(२) प्रत्यक्ष गणना रीति (Direct count)—इस रीति से ठीक गणना हो सकती है क्योंकि प्रत्येक वन्य जीव की गणना की जाती है पर एक ही जीव कई बार गिना जा सकता है।

(३) द्रश्य गणना रीति (Visual count)—इस रीति में प्रत्येक वन्य जीव को देख कर गिना जाता है—दूरदर्शक यन्त्र का प्रयोग किया जाता है घने जंगलों में यह रीति काम में नहीं लाई जा सकती।

(४) हाँका गणना रीति (Drive count)—घने वन में वन्य जीवों को हाँका करा कर मैदानों या मोटर मार्गों की तरफ भगा कर गिना जाता है उचित स्थानों पर गिनने वाले मनुष्य छिपे बैठे रहते हैं और जैसे ही वन्य जीव सामने आते हैं गिने जाते हैं इस रीति से गणना ठीक होती है पर खर्च अधिक है। गिनने वाले भी विशेष शिक्षा प्राप्त होने चाहियें जिससे वन्य जीवों को पहचान सके।

(५) मेंगनी गणना रीति (Scrape count)—भारत के कुछ मृगों की प्रकृति ऐसी है कि वह एक ही स्थान पर मेंगनी करते हैं। इस कारण नील गाय, चिकारा तथा चौसिंहा इत्यादि की गणना में यदि क्षेत्र विशेष में जहाँ वह रहते हैं मेंगनी करने के स्थानों (Faecal bed) की गणना की जावे तो मृगों की गणना हो सकती है यह रीति उपयुक्त और सही है।

(६) गिरि के भारतीय बबर शेरों की गणना के लिये कुछ वर्ष पहले एक और रीति प्रयोग में लाई गई। (Colour splash count) शेरों पर विशेष पिचकारी से रंग फेंका गया और उनकी खाल कुछ दिनों के लिये रंग गई। वन्य जीव गणना में बार बार एक ही जीव की गणना होने की संभावना रहती है पर एक बार रंगा हुआ वन्य जीव दुबारा नहीं गिना जा सकता है। यह रीति तो ठीक बैठती है पर बबर शेर रंग फेंकने पर क्रोधित हो जाते थे और घने जंगलों में छिप जाते थे। शेरों पर रंग फेंकने वालों के लिये भी संकट हो जाता था।

(७) पट्टा अथवा छल्ला गणना रीति (Tag or ring count)—इस रीति के अनुसार वन्य जीव को (Trap) फाँसा जाता है और उसके बाद एक रंगीन पट्टा या छल्ला डाल दिया जाता है जिससे वह दुबारा न गिना जावे।

वन्य जीवों को फाँसने की एक नई रीति निकली है। एक मूर्छित करने वाले रसायन (chemical) से भरी हुई पिचकारी चलाई जाती है जो वन्य जीव के शरीर में घुस कर उसे कुछ समय के लिये बेहोश कर देती है। इसी मूर्छित अवस्था में जीव के छल्ला या पट्टा डाल दिया जाता है।

(८) Aerial survey—(हवाई जहाज से गणना) उन वन्य जीवों का जो मैदानों में रहते हैं या प्रातःकाल और संध्या समय मैदानों में निकलते हैं हवाई जहाज से धीरे और नीचे उड़ते हुये प्रत्यक्ष गणना की जा सकती है, देखने के लिये दूरदर्शक यंत्र का प्रयोग किया जाता है।

(९) ऐसे वन्य जीवों की गणना (Aerial Photography) वायुयान से फोटो लेकर भी की जाती है और भारत के बहुत से क्षेत्रों के लिये उपयुक्त है। वायुयान से देख कर गिनने से वायुयान से फोटो गणना की रीति अधिक ठीक है।

वन्य जीवों के विरुद्ध रसायनिक शस्त्र चलाने की प्रथा भी बहुत प्राचीन है पर वन्य जीवों की घटती संख्या देखते हुए इसका एक नया प्रयोग भी है जो शिकार की विधि में एक क्रांतिकारी परिवर्तन ला सकता है।

यह प्रयोग है बन्दूक से गोली न मार कर एक रसायनिक पिचकारी मारी जावे जिससे शेर, हाथी इत्यादि कुछ समय के लिये मूर्छित हो जावे—उसके पास खड़े होकर फोटो भी खिंचवाया जा सकता है खतरे के निकट होने का रोमाँच भी शिकारी को होगा और वन्य जीव मरेगा भी नहीं—शिकारी को फोटो भी मिल जायेगा। पाठक इस नये प्रयोग को केवल लेखक की कल्पना न समझें संसार के कुछ देशों में यह प्रयोग किया जा रहा है और दिन दूर नहीं है जब भारत के कुछ शिकारी इसे प्रयोग के क्षेत्र से निकाल कर वास्तविकता का रूप देंगे।

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महाराजा रामानुज शरणसिंह जू देव—सरगुजा नरेश ने १९५५ तक शिकार में ११११ शेर (Tigers) २००० तेंदुये (Panthers) मारे। सबसे बड़ा शेर १० फीट १० इंच का था। सबसे बड़ी शेरनी ९ फीट ६ इंच की थी। सबसे पहला शेर ८ वर्ष ११ महीने की आयु में मारा।

क्या किसी और शिकारी ने इससे अधिक शेर मारे हैं ?

शेर—जो पेड़ पर चढ़ गया

“अज्ञात”

नैनीताल तराई क्षेत्र में प्रत्येक वर्ष दिसम्बर से मई तक बहुधा शिकारी शेर के शिकार के लिये जाते हैं। मुझे भी एक बार इस क्षेत्र में जाने का अवसर मिला। इस क्षेत्र के “जौला साल बन विश्राम भवन” में मेरे ठहरने का प्रबन्ध हुआ था। इसके समीप ही बंगले के नीचे से होकर जाने वाली हल्द्वानी-टनकपुर सड़क के किनारे सीमेंट का एक चौदह फीट ऊंचा स्मारक स्तम्भ बना हुआ है। उसे देख कर पूछने पर यह ज्ञात हुआ कि यह स्मारक शिकार की एक रोमांचकारी घटना की स्मृति में बनवाया गया है। इस घटना में जंगलात के साहब की पत्नी शेर का शिकार होते होते बच गई थी। इसी से जंगलात के ठेकेदारों ने मेम साहब के बच जाने की खुशी में भगवान को धन्यवाद देने के निमित्त उक्त स्मृति स्तम्भ बनवाया था।

यह जान कर मेरी उत्सुकता बढ़ने लगी और सच्ची घटना के पता लगाने पर जो कुछ मुझे ज्ञात हुआ वह जंगलात के साहब और उनकी पत्नी की आपबीती के आधार पर उनके अपने शब्दों में इस प्रकार है—

“इससे पहले कि कहानी शुरू करूँ यह बता देना आवश्यक है कि उत्तर प्रदेश के घने जंगलों में शेर का शिकार करने के लिये ‘हाँके’ में कुछ हाथियों का प्रयोग किया जाता है और कुछ आदमी शेर को इधर उधर-निकल जाने से रोकने के लिये ‘रोक’ का काम करते हैं।

जब शेर अपने शिकार की लाश को घसीटता हुआ हाँके जाने वाले घने जंगल में ले जाता है तब यह सम्भावना होती है कि शेर हाँके के टुकड़े में ही है और हाँके में फंस जायेगा। हाँके की सफलता शेर के स्वाभाविक रूप से भाग कर छिपने की दिशा को जानने तथा ‘रोक’ के ठीक काम करने पर निर्भर होती है। इस प्रकार शेर को हाँक कर एक या दो मचानों के निकट जिन पर शिकारी बैठे होते हैं ले जाया जाता है।

यह घटना “जौला साल” क्षेत्र के प्रसिद्ध हाँके के टुकड़े ‘रेला’ से सम्बन्धित है। इस टुकड़े में प्रत्येक वर्ष अनेक शेर मारे जाते हैं। यह ‘रेला’ हाँके का टुकड़ा बायीं ओर पथरीली नदी से घिरा हुआ है जिसमें जंगल न होने के कारण हाँका हुआ शेर नहीं जाता, क्योंकि शेर स्वभावतः घने जंगल की ओर जाता है। दाहिनी तरफ पहाड़ी ढाल पर घना जंगल है, जिसमें होकर शेर पहाड़ों में जाना चाहता है परन्तु रोक लगा कर उसे रोकने का प्रबन्ध कर लिया जाता है।

इस टुकड़े में हाँका शुरू होने पर शेर उठ खड़ा होता है और घास में होता हुआ पहाड़ों की तरफ जाता है। वहाँ ‘रोक’ को देख कर फिर वापस होता है और पीछे से हाथी धीरे-धीरे आगे बढ़ते हैं। शेर हाँक कर मचान के सामने निकलने पर लाचार हो जाता है।

पाठक कल्पना करें कि शरद् ऋतु की एक प्रातः को इस मनोरम स्थान पर हैं जहाँ हिमालय की प्रथम पर्वत श्रेणियाँ उत्तरी भारत के मैदानों को एकाएक रोकती हुई खड़ी हैं। और अनेक दूटे कटे पहाड़ और हिमालय की चरण स्पर्शी छोटी छोटी वनाच्छादित पहाड़ियों में अनेक पथरीली नदियों और नालों को जन्म देती हैं।

इसी स्थान की घटना है। सन् १९२५ ई० का अन्तिम दिन था, मुझे समाचार मिला कि शेर ने पाड़ा मारा है और उसे घसीट कर 'रेला' हाँके के टुकड़े में ले गया है। यह सुनते ही हम सब में सनसनी फैल गई और हाँके वालों, हाथियों, बन्दूकों, राइफलों तथा रस्सों की सीढ़ी लेकर मैं और मेरी पत्नी हाथी पर चढ़ कर चल दिये। घटनास्थल से दो फर्लांग पहले ही हाथियों से उतरना पड़ा और एक लम्बा चक्कर लगा कर थके माँदे मचान के लिये निश्चित स्थान पर चुपके-चुपके पहुँचे, जिससे शेर को हमारी उपस्थिति का आभास न हो। मैंने अपने लिये चुपके से एक मचान बंधवाया और अपनी पत्नी के लिये इस मचान के दाहिनी ओर पीछे लगभग ४० गज की दूरी पर एक पेड़ पर मचान बंधवाया। यह पेड़ लगभग ५-६ फीट की गोलाई का था। और इसमें लगभग १४ फीट की ऊँचाई पर निकली हुई पहली शाखाओं पर मचान बाँधा गया था।

ठीक मेरे मचान के सामने घने नरकुल का लगभग २५ गज लम्बा चौड़ा एक टुकड़ा था, जिसके चारों तरफ घनी घास और झाड़ियाँ थी। जैसे ही हाँका शुरू हुआ मैंने एक 'रोक' को ताली बजाते सुना और उस दिशा में शेर दो बार गरजा। तीन मिनट बाद मैंने नरकुल में आते हुए शेर की आहट सुनी और शीघ्र ही वह झाड़ियों से बाहर निकल कर भुक्ता हुआ तेजी से चल पड़ा। मेरे पास "हाईवैलासिटी ४०४ बोर" जैफ्रीज की बनाई हुई मँगजीन राइफल थी जिससे मैंने कई शेरों का शिकार किया था। मेरे पास मँगजीन और नाल में चार कारतूस थे और कुछ कारतूस मचान पर अलग रखे थे। शेर का घास से बाहर निकलना था कि मैंने गोली चलाई और लक्ष्य चूक गया और शेर गरज कर नरकुल में वापस लौट गया।

हाँका आगे चला और हाथी जैसे ही नरकुल में घुसे कि शेर इस बार सरपट भागता और भयंकर गर्जना करता हुआ फिर से बाहर निकला। वह मेरे बायीं ओर जा रहा था कि मैंने गोली चलाई, पर यह निशाना भी खाली गया। अब शेर मेरी पत्नी के मचान की ओर लगभग ३० गज के फासले पर निकला और जैसे ही उनके मचान के सामने से निकला, उन्होंने गोली चलाई जो शेर के हृदय से छः इन्च ऊपर और रीढ़ की हड्डी के नीचे लगी, जिससे शेर रुका और गिर कर डोंकने लगा।

अब इस कथा का अविश्वसनीय अंश प्रारम्भ होता है। शेर क्रोधान्ध होकर घूमा और मेरी पत्नी को मचान पर देखते ही झपट कर पालतू बिल्ली के समान आसानी से पेड़ पर सीधा चढ़ने लगा। उसकी अगली भुजायें पेड़ को जकड़े हुए थी, शेर मचान के नीचे पेड़ पर सीधा चढ़ रहा था कि मैं गोली चलाने के लिये घूमा, जिसके कारण मचान पर अलग रखे हुये मेरे कारतूस खड़बड़ा कर जमीन पर जा गिरे। ऐसी स्थिति में शेर पर गोली चलाने के अतिरिक्त मेरे पास और कोई चारा न था, भले ही गोली मेरी पत्नी को क्यों न लग जाती। शेर पेड़ पर आधी दूर तक चढ़ा होगा कि मैंने गोली चलाई, जो उसकी खाल को छीलती हुई आगे चली गई। जैसे ही मैंने राइफल की तरफ ध्यान दिया तो पता चला कि अब केवल एक गोली के अतिरिक्त और कुछ न था।

मैंने शेर की तरफ देखा तो सामने मचान के ऊपर मेरी पत्नी खड़ी हुई थी, और शेर के मुँह में उनकी राइफल की नाल थी। (बाद को देखा गया कि शेर के दाँतों के निशान राइफल की नाल पर आठ इंच ऊपर थे) मेरी पत्नी ने 'लिबलिबी' दबाई और खट का शब्द हुआ परन्तु कारतूस न चला। पाठक यह भी समझ लें कि अब शेर का दो तिहाई वजन मचान की एक पाटी पर था। और शेर के मचान पर चढ़ने के प्रयत्न के कारण मचान जोरों से हिल रहा था। अगले ही क्षण मैंने अपनी पत्नी को लड़खड़ाते हुए मचान के दूसरी ओर शेर से दूर जमीन पर गिरते हुये देखा। अब शेर मचान के ऊपर था पत्नी मचान के नीचे की घास में थी। अब पत्नी पर जो बीती उसको उन्हीं के शब्दों में पढ़िये।

“जैसे ही मैंने शेर पर गोली चलाई थी, वह मुड़ा और मुझे देखते ही गरजता हुआ मेरे पेड़ की तरफ दौड़ा। मैंने सोचा कि वह भागता हुआ आगे निकल जायेगा, परन्तु एकाएक मुझे आभास हुआ कि वह पेड़ पर चढ़ रहा है। मैं मचान पर खड़ी ही होने पाई थी कि उसका धारीदार चेहरा और पंजा मचान के एक तरफ ऊपर दिखाई दिये, उसके मुँह से प्रत्येक गर्जना के साथ खून और गरम साँस निकल रही थी। मैंने राइफल की नाल उसके मुँह में ठूस कर लिबलिबी दबाई पर राइफल नहीं चली। अब मैं बेबस हो गई, कुछ भी समझ में नहीं आया कि क्या करूं। शेर ने राइफल दाँतों से दबा रखी थी और मुझसे रस्साकशी सी हो रही थी। इतने में शेर का दूसरा पंजा मचान को फाड़कर ऊपर पहुँचा। उससे बचने के प्रयत्न में मैं पीछे हटी ही थी कि मुझे ऐसा लगा कि मैं मचान से नीचे गिर रही हूँ और सीधी शेर के मुँह में जा रही हूँ। जमीन पर गिरने का मुझे पता नहीं लगा और मैंने अपने आप को अपने पति के मचान की तरफ घास में भागते हुए पाया और सोच रही थी कि शेर अब मुझे पकड़ने ही वाला है। पति के पेड़ के नीचे मैं और मेरा हाथी दोनों साथ ही पहुँचे। मुझे हाथी पर चढ़ा कर महावत जंगल से बाहर ले गया और आश्चर्य इस बात का है कि केवल कलाई में मोच आ जाने और मचान से गिरने पर कुछ खरोंचे लग जाने के अतिरिक्त और कोई चोट न आई थी।”

अब साहब ने इस घटना का अन्त इस प्रकार प्रस्तुत किया है :—

“शेर ने क्रोध में मेरी पत्नी को गिरते हुए नहीं देखा। वह मचान को दाँत व पंजों से चीर फाड़ रहा था, ऐसी स्थिति में मैंने अपनी अन्तिम गोली चलाई जो सौभाग्य से ठीक उसके हृदय में जा लगी। जिससे वह उलट कर मचान के नीचे घास में गिरने के कारण आँखों से ओझल हो गया। शेर बड़ा तन्दुरुस्त और जवान था, जिसकी लम्बाई ६ फीट ३ इंच थी, और उसके केवल दो ही गोली लगी थी, एक हृदय के समीप और दूसरी ठीक हृदय में, जिससे वह तुरन्त मर गया था।”

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